

STRATEGIC RESEARCH PLAN (SUMMARY)

BISHOP'S UNIVERSITY

2022-2024

Introduction

Research is a fundamental part of Bishop University's institutional mandate as a University in the Quebec and Canadian post-secondary landscapes and beyond. Bishop's students and faculty researchers must continue to contribute to the generation of new knowledge, to mobilizing this knowledge to relevant community partners and users of the research and, in doing so, contribute to innovation and the economic development of the region, province and country. Bishop's is committed to the continuous growth of its research activity and scholarly reputation in Canada.

Opportunities to participate and succeed in research and creative scholarship are critical to our ability to recruit and retain exceptional faculty and students, our ability to link excellence in teaching and research, as well as the quality of research experiences we offer to our students. Our integrated model of teaching and research, involving the direct training of undergraduate and graduate students by faculty researchers, is highly experiential, personalized, and effective in producing well-trained graduates who excel in the next stages of their research training or careers.

Like previous plans, this version of Bishop's University's Strategic Research Plan (SRP) recognizes that there are many different approaches to research and research creation. Some researchers work alone; others work in collaborative teams with colleagues on campus and/or at other universities. Some research programs require performance, creation, and laboratory spaces and equipment; others require access to field locations near and far; all require access to information resources. Our strategic plan further recognizes that some research programs, especially those in the sciences, provide opportunities for integrating graduate students owing to the presence of research-based master's degree programs. Recent Senate approval of individualized research-based Master of Arts and Master of Sciences degrees increases the options for researchers in the arts, humanities, social sciences, and in science programs who have not had access to graduate students on campus. Development of these new individualized graduate degrees, as a way of providing opportunities for faculty and as a way of testing potential new graduate degrees, will also be an objective of this version of the Strategic Research Plan. Regardless of the discipline, subject matter, and resource requirements, all activities are valued and contribute to our collective knowledge and development.

Organization of the Strategic Research Plan for 2017-2022, and Extension to 2024

This document expands the SRP presented in 2017 until 2024, which built on the five previous strategic plans for research at Bishop's University. The 2017-2022 plan set an overall vision statement and six key priority areas, associated goals and actions. In 2020, the Vice-Principal Academic and Research led an evaluation process of the SRP, supported by the Senate Research Committee and the Director of Research and Graduate Studies. Of main interest in this evaluation was to align the SRP with the 2019-2024 Bishop's University's Strategic Framework (BUSF). The evaluation and subsequent consultations with key stakeholders in 2021 and in 2022 led to some important decisions with regards to the integration of research in the BUSF.

Overall vision of the 2022-2024 Strategic Research Plan

Bishop's will continue to build and enhance an environment that supports peer-reviewed scholarly research and research creation in many different forms. Bishop's University is committed to excellence in research and creative practices, to the support of our researchers and students in the pursuit and dissemination of new knowledge and creative activity, and to the development of the next generation of researchers, creative artists, and leaders.

Undergraduate and graduate students will be meaningfully engaged in research of all kinds. The training of future researchers is a priority for all universities and all research funding agencies. Moreover, involving students in doing research, alone, with a faculty mentor or with student colleagues, is a form of experiential learning, a strategic goal of the University and a priority identified in the Strategic Framework. The SRP aims to ensure that research and research creation can be part of every student's experience at our University and will be an integral part of the role of our faculty members and librarians.

An important addition to this SRP is the clear commitment to the University's Equity, Diversity and Inclusion (EDI) mission as an overarching guiding principle. Providing an equitable and unbiased space for research to grow and expand in a respectful way of the communities and territories in which our researchers work will guide the priority areas presented in this SRP.

As a Dimensions Charter endorser, Bishop's University recognizes that "equity, diversity and inclusion strengthen the research community, the quality, relevance and impact of research, and the opportunity for the full pool of potential participants". Most notably, the Charter aims to "engage in meaningful, respectful and continuous dialogue and collaboration with First Nations, Inuit and Métis Peoples".

Strategic Research Plan Priority Areas

1. Support the Enhancement and Development of Key Research Priority Areas in an Agile Manner to Foster and Prioritize Interdisciplinary Focus Areas

Goal: That a large majority of funded researchers be associated with and active within a key interdisciplinary research priority area. The following eight teams were approved for a three-year period.

STellar Astrophysics and Relativity (STAR II) Interdisciplinary Group: Recognized for consistent success and excellence, STAR II integrates researchers of the Department of Physics and Astronomy (Dr. Valerio Faraoni, Dr. Lorne Nelson, Dr. Jason Rowe, Dr. John Ruan, Dr. Fayçal Hammad, visiting scholar Dr. Kelsey Hoffman) alongside researchers from the Department of Mathematics (Dr. Trevor Jones, Dr. Brad Willms). Members of STAR II collaborate closely with internal and external collaborators, and benefit from the presence of postdoctoral fellows in the Department of Physics and Astronomy. Members, collaborators, and their graduate students combine their expertise to tackle some of the fundamental questions in both physics and astronomy. This Team includes two Canada Research Chairs: Dr. Jason Rowe, CRC in Exoplanet Astrophysics and Dr. John Ruan, CRC in Multi-Messenger Astrophysics, Dr. John Ruan. STAR II also plans to grow their collaborations, both locally and internationally.

Indigeneity and Race Research Axis: Building on the successes of the former Indigeneity axis of the Crossing Borders cluster, the Indigeneity and Race Research Axis (IRRA), is addressing questions relative to self-identification, recognition and/or marginalization of groups occupying, having occupied or willing to occupy a specific territory, to explore concepts of race and indigeneity. Composed of Dr. Mary Ellen Donnan (Sociology), Dr. Jean Manore (History), Dr. Dawn Wiseman (Education), Dr. Vicki Chartrand (Sociology), Dr. Linda Morra (English), Dr. Avril Aitken (Education) and Dr. Lisa Taylor (Education). As of February 2022, the IRRA includes a Canada Research Chair, Dr. Genner Llanes-Ortiz, whose work focuses on Digital Indigeneities. This Team's objectives align perfectly with Bishop's ongoing efforts relating to reconciliation with indigenous communities in Canada.

Plurilingual Pedagogies Team: Dr. Sunny Man Chu Lau of the School of Education, together with Dr. Sarah Théberge and Caroline Dault of the Département d'études françaises et québécoises, in the Plurilingual Pedagogies Team, will explore

the use of plurilingual strategies to facilitate Chinese transnational students' learning of French as an additional language. This Team aligns with the focus of Dr. Lau's new Canada Research Chair in Plurilingual Teaching and Learning. Members of this Team also have strong collaborations with the Université de Sherbrooke and the Cégep de Sherbrooke, through multiple multi-institutional projects, taking part in Bishop's goal of increasing research connections among its researchers and colleagues in other institutions.

Agro-Biodiversity Team: Also building on multi-institutional research connections, Dr. Patrick Bergeron, Dr. Jade Savage and Dr. Michael Richardson of the Department of Biological Sciences, together with Dr. Darren Bardati of the Department of Environmental Studies and Geography, join forces with biology researchers Dr. Dany Garant and Dr. Denis Réale, respectively of the Université de Sherbrooke and Université du Québec à Montréal, to study how agricultural practices influence environmental quality by comparing bio-indicator species development between conventional/industrial and organic farms. The Agro- Biodiversity Team will be collaborating with Dr. Jérémie Petitclerc, retired research scientist at Agriculture and Agri-Food Canada, who is a board member of an organization preserving the health one of the lakes included in the Teams study area. This will be great staple of how community partnership can ensure knowledge transfer to the local community and engage partners in the continuation of the project.

Applied Radical Optimism for Climate Change Hope in Education (AppROCCE) Team: Climate change, education, and psychological health are the interdisciplinary concepts that Dr. Dawn Wiseman and Dr. Mitchell McLarnon-Silk, of the School of Education, together with Dr. Catherine Malboeuf-Hurtubise, of the Department of Psychology, aim to address. Educators engaging with students about climate change can influence their students' perceptions on the subject, for better or worst. AppROCCE Team, a new area of research expertise at BU, will examine barriers, such as anxiety, grief and paralysis, to teaching and learning about/within the context of climate change and develop innovative means of supporting educators and young people in living out the experience of climate change with hope.

Heart-Rate Variability and Academic Performance Team: A new highly multi-disciplinary team, the Heart-Rate Variability and Academic Performance Team is composed of Dr. Russell Butler (Computer Science), Dr. Rafael Tedesqui (Sports Studies), Dr. Adrianna Mendrek and Dr. Suzanne Hood (Psychology), and Dr. Estelle Chamoux (Biology). Their objectives are to determine how students' heart rate variability during lectures, exams, and as a function of circadian cycle and personality characteristics can predict their academic success. The research program proposed by this Team has exciting potential for interdisciplinary academic programming and potential practical implications for student success and retention.

Rescuing the Archive Team: Moving towards a process of inclusive digital history, Dr. David Webster of the Department of History and Dr. Claire Grogan of the Department of English, with the help of Catherine Lavallée-Welch, University Librarian, will be working on digitization and archival creation in the Rescuing the Archive Team. The results will increase availability of digitized material on local and international histories, and enhanced understanding of best practices in digital archive creation. It is exciting for Bishop's to support an interdisciplinary research team as one way to contribute to the University's strategic objective to reimagine and revitalize the humanities.

Civic and Community Engagement in Multigenerational Contexts Team: This team uses a variety of approaches to optimize the impact of academic activities on society, by examining civic and community engagement across age groups, on local, national, and global levels, and with a priority and investment in equity and inclusion. Its members possess expertise in arts, humanities, business, social sciences, and natural sciences. Dr. Heather Lawford (Psychology) is a Canada Research Chair in youth development with expertise in youth engagement and youth generativity. She is the academic co-director of the Students Commission of Canada, where she partners with youth and adult allies to create more equitable communities and offer opportunities to young people who are furthest from them. Dr. Sarah-Myriam Martin-Brûlé (Political Science and International Studies) is Deputy Director of the Réseau de recherche sur les opérations de paix. She works with Canadian and allied military experts to develop policies and best practices towards global peace. Dr. Jessica Riddell is the co-founder of the award winning Online Learning & Teaching Consultants (OLTC), just one example of where she partners with students in her research on Teaching and Learning in Higher Education institutions. Dr. Michael Teed (William School of Business) works with organizations to increase psychological safety in

the workplace, and is an expert in leadership development. Notably, he partnered with the Mental Health Commission of Canada to develop national standards of mental health.

2. Increase the Number of and Supports for Research Chairs

Goal: That Bishop’s University provides continual support for Canada Research Chairs and for other types of research chairs. Since the last iteration of the SRP, Bishop’s has increased its allocation of Canada Research Chairs from three to five. Continued focus in the areas of research excellence at our institution have also led to the creation of the Jarislowsky Chair in Undergraduate Teaching excellence held by Dr. Jessica Riddell since May 2017 and the awarding of a Fonds de recherche du Québec – santé Junior 1 Research Scholar, Dr. Catherine Malboeuf-Hurtubise, in 2020. Management of the allocation of chairs is the responsibility of the Vice- Principal Academic and Research who makes the final decision on allocations. The Vice-Principal Academic and Research invites submissions for new or replacement Chairs and consults widely before as part of this process, working with an advisory committee in order to allocate a Chair position within a particular research area. The committee is composed of four academic Deans and the Director of Research and Graduate Studies. The following factors figure in the decision-making process: the nature and size of various academic departments, priorities for faculty renewal and replacement, strategic areas of emphasis for research (as articulated in the SRP), and Bishop’s equity targets with regards to the CRC program requirements (including gender equity).

	Chair Level	Research Theme	Agency	Appointment
Dr. Heather Lawford	Tier 2	Youth Development	SSHRC	2018-2023
Dr. John Ruan	Tier 2	Multi-Messenger Astrophysics	NSERC	2021-202
Dr. Sunny Lau	Tier 2	Plurilingual Integrated Teaching and Learning	SSHRC	2021-2016
Dr. Genner Llanes-Ortiz	Tier 2	Digital Indigeneity	SSHRC	2022-2027
Dr. Jason Rowe	Tier 2	Exoplanet Astrophysics	NSERC	2022-2027

3. Enhance Supports for Faculty Researchers and Creators

Goal: That administrative supports and professional development for faculty and librarian researchers and creators are streamlined to facilitate research processes. To this end, we will develop the data management policy, improve collaboration between the Research Office, Human Resources, and Business office, improve our mentoring program for early career researchers, and develop new strategies to better support research creators.

4. Increase and Diversify External Research Funding

Goal: To increase our overall external research funding by 5%, particularly (but not exclusively) via contracts with industry and government agencies, for research, innovation, and research creation. Meeting this goal will also involve strengthening collaborative efforts with l’Université de Sherbrooke, other Quebec Universities, and the three other Universities of the Maple League (Acadia, St. FX, and Mount Allison).

5. Increase and Enhance Research Experiences and Training for Bishop’s Students

Goal: Enhance the quality of available research and training opportunities for students. As a key means to help develop students’ 21st century skills and competencies, especially critical thinking, we aim to ensure that more students, undergraduate as well as graduate, are engaged directly in research activity during their time at Bishop’s. Recent Senate approval of individualized research-based Master of Arts and Master of Sciences increase options for researchers in the arts, humanities, social sciences, and in some sciences who have not had access to graduate students on campus and will help pave the new for the creation of more sustainable graduate programs in key priority areas.

6. Focus on the Promotion of the Research Mission and the Mobilization of Knowledge Created by Bishop's University Researchers

Goal: The main goal remains to demonstrate to the internal Bishop's community as well as the outside world that the research done at Bishop's is not only relevant and useful, but creates long-lasting impact. Knowledge mobilization has been brought to the forefront by the creation of the Graduate Certificate in Knowledge Mobilization in 2020, and a membership to Research Impact Canada in 2020. This priority is a key element of our current redevelopment of research support and innovation planning.

Outcomes and Assessment

The University's Strategic Research Plans must be approved by the Senate and the Board of Governors. The extended Strategic Research Plan (2017-2024) will be assessed formally in 2024 as we lay the foundations for the next iteration of the University's research strategy, aligning with the priorities of the University Strategic Framework. Included in the assessment process will be an analysis of the revenues and costs dedicated to research at Bishop's compared to similarly sized institutions. All stated objectives will be evaluated on an annual basis by the Vice-Principal Academic and Research. All components of the plan are integrated with the actions of the Senate Planning Committee and the Senate Research Committee, the functions of the Advancement and Research Offices, and the activities of various other committees (e.g. Graduate Studies, Experiential Learning), with the Vice-Principal Academic and Research responsible for institutional coordination.

Approvals of the 2022-2024 Strategic Research Plan

- Approved by the Senate Research Committee on May 2, 2022
- Approved by Senate on May 20, 2022
- Approved by the Board of Governors on June 10, 2022