

Saint Mary's University's Strategic Research Plan 2021-26

Short Summary Version

(full versions here: <https://news.smu.ca/research-plan> and https://www.smu.ca/webfiles/SMU_StrategicResearchPlan_2021-26.pdf)

Introduction

The 2021 Strategic Research Plan (SRP) for Saint Mary's University represents the renewal of this institutional over-arching guiding research strategy document, which was first envisioned in 1999 and last updated prior to this renewal in 2012. The renewal of this SRP was done in parallel to, and in conjunction with, the renewal of the University Academic Plan.

The Saint Mary's SRP not only fulfills the requirements of certain funding programs for the Government of Canada (e.g., the Canada Research Chairs Program) but also articulates the University's overall research mission and objectives and outlines actions designed to support them. The SRP does not stand alone in this role but stands both within the context of other internal institutional guiding Plans – notably, the overall Saint Mary's University Strategic Plan 2017-2022 (<https://president.smu.ca/2017-2022-plan>), the afore-mentioned Academic Plan, the Strategic Plans of individual Faculties, and the SMU Canada Research Chair EDI Action Plan (<https://www.smu.ca/webfiles/SMU-CRC-Action-Plan-June2020.pdf>) – and within the context of other external factors/agencies exerting influence on research directions – such as Research Nova Scotia regionally, and the United Nations Sustainable Development Goals internationally.

Within this environment of competing demands and priorities, this renewed SRP provides a framework for supporting Saint Mary's University researchers in ways to reinforce the internal university priorities, provide guidance for future resource investments to support research success broadly, and enhance the public research profile and reputation of Saint Mary's University.

Research Objectives

This SRP provides a framework that supports the following tetrad of **objectives**, even with the recognition that these objectives are not always in a fully aligned equilibrium:

- to promote institutional priorities and domains of particular research strength through the identification of Major Research Themes;
- to support the research work of as many Saint Mary's University faculty members as possible across the broad spectrum of scholarly pursuits, with attention to the barriers to success that equity-deserving groups may face;
- to ensure that students, both undergraduate and graduate, benefit from research activities at the University; and,
- to encourage the building of collaborative networks of researchers that promote the development of new initiatives and ideas in support of the Major Research Themes and of entirely new directions in whichever area they may arise.

Major Research Themes

Excellent scholarly activity and research are carried out in many disciplines beyond those that may identify a connection to any of these five Major Research Themes. However, these themes are defined to provide strategic focus for resource investment and allocation of Canada Research Chairs in particular – designed to engage a broad sector of Saint Mary's faculty into the key areas. These Themes are intended

to enhance the research success and profile of the entire research enterprise at Saint Mary's University (both inside and outside the defined Themes) through developing and fostering research network-building and research excellence.

These Major Research Themes are not presented in any order of priority, and the brief discussions provided are meant as exemplars only, without meaning to be exhaustive or exclusionary.

Theme 1: Climate Change and the Environment – Monitoring, Impact Assessment, Solutions

Saint Mary's University has developed clusters of research excellence across disciplines that centre on understanding the wide range of impacts on the environment and society arising from Climate Change and on developing solutions to minimize these impacts. In support of these efforts, Saint Mary's has established a *School of the Environment*, which serves as a hub for environmental education, research, and outreach, bringing together students and professors from all of the University's programs that are explicitly environmental in focus. Our environment-focused academic units, both inside and outside the School, have fostered a strong scholarly atmosphere for undergraduate and graduate students and faculty researchers.

The objectives within this Major Research Theme include:

- To engage in research that focuses on the Environment, particularly the impacts of Climate Change, through leadership in monitoring, assessing impact, or investigating/implementing solutions to respond to such impacts.
- To engage in research that studies societal impacts of Climate Change, including leadership in public policy solutions to respond to such impacts.
- To enhance and build interdisciplinary networks of researchers, from within and external to Saint Mary's University, and community partners to monitor, assess impact, and develop solutions to issues arising from Climate Change.

Theme 2: Connecting to Communities - Engaging, Partnering, Supporting Atlantic Canada communities

With a specific lens to engaging with Nova Scotia communities, Saint Mary's is the lead and host institution for a province-wide (provincially supported) multi-institutional network dedicated to community-engaged research: the Change Lab Action Research Initiative (CLARI). Saint Mary's researchers have been able to both establish new community contacts as well as expand existing relationships, with the support of CLARI and are making significant research contributions with a broad range of community partners; for example, in areas of equity and bias within law enforcement and incarceration; food security; skill-training and issues of equitable access within both the not-for-profit and for-profit sectors. CLARI has also supported Saint Mary's in establishing and/or maintaining research partnerships with Nova Scotia Mi'kmaq and African Nova Scotian communities and community groups.

The objectives within this Major Research Theme include:

- To engage in community-engaged research involving collaborative partnerships with community groups to support the social and economic development, health, and wellbeing of these communities – from Nova Scotia, to Atlantic Canada, and beyond.
- To enhance the interdisciplinary study of culture, peoples and their history, the natural environment and its resources, and health and wellbeing as it relates to – and extends beyond – Atlantic Canada.
- To enhance and build interdisciplinary networks of researchers, from within and external to Saint Mary's University, who will engage with community groups to conduct research relevant to supporting and improving the lives of people in these communities.

- To build and maintain sustained relationships with Nova Scotia Mi'kmaq and African Nova Scotian communities so Saint Mary's can be a trusted partner on research in areas these communities identify as important.

Theme 3: Innovative Science – Exploring Fundamentals, Developing Applications

A substantial part of the growth in garnering external funding support for research at Saint Mary's University over the last two decades is related to research in areas broadly defined as the *Natural Sciences* – emerging out of nine departments/divisions that support these areas (Astronomy & Physics, Biology, Chemistry, Engineering, Environmental Science, Geography, Geology, Mathematics & Computing Science, and Psychology). External research grants and contracts from these units represented approximately 70% of the university total in 2021. Further, of this external funding for Natural Sciences research, over two-thirds represented contract partnerships supported through our Office of Innovation and Community Engagement – which indicates research with a directed application and defined deliverables. This reflects Saint Mary's University's strong positioning in applied research within the natural sciences, balanced by solid leadership in fundamental, curiosity-driven science research.

The objectives within this Major Research Theme include:

- To engage in applied natural science research involving collaborations with industry or government agency partners to not only advance the technical challenges presented but also provide quality experiential learning opportunities for undergraduate and graduate students.
- To enhance and build interdisciplinary networks of researchers, from within and external to Saint Mary's University, to develop innovative scientific approaches for projects aimed at improvements in industry, government, or other technical applications.
- To develop and enhance national/international collaborations in the pursuit of advances in fundamental natural science research, with a particular emphasis in the fields of Astrophysics and Subatomic Physics.

Theme 4: Modern Global Citizenship Issues – Migration, Development, Big Data

Theme 4 aligns with one of the institution's pillars in the current Strategic Plan (2017-22), Intercultural Learning. This pillar has been driven by the long-standing international character of our student body, with students hailing from over 100 countries and representing approximately 30% of the student population. With this context of being a truly international university, Saint Mary's finds a natural focus on global issues: on understanding the meaning of citizenship and the connections to movements of people – immigration, migration, forced displacement – and the factors which drive those movements, including the wealth and social inequity between countries, and individual life and career aspirations. Saint Mary's researchers are contributing impactfully to these complex challenges, forming the genesis of a coherent research cluster under this Major Theme.

The objectives within this Major Research Theme include:

- To enhance and build interdisciplinary networks of researchers, from within and external to Saint Mary's University, to develop innovative approaches (involving social sciences, humanities, and/or computing/analytics) for projects addressing critical issues related to the broad concept of *Modern Global Citizenship*.
- To develop and enhance national/international collaborations in the pursuit of advancing the understanding of issues related to the migration of peoples, including (but not restricted to): driving forces behind migration, experiences of migrating people, impacts and role of immigration in host/receptor regions, and integrative experiences of immigrant people.

- To provide critical, evidence-based, and justice-focused policy guidance to support global efforts to support people on the move.
- To develop and enhance data analytics to support research within the broad thematic area of *Modern Global Citizenship*.

Theme 5: Innovation in Business and Workplace Studies

This Major Research Theme is the only one which has been retained through all prior versions of the Saint Mary's Strategic Research Plan, and into the current Plan. This continuity arises because of the already broad and interdisciplinary reach of this Theme (a key aspect for all Major Research Themes in the current Plan), and because of the ongoing high-quality research leadership that continues to emerge within this Thematic area.

The objectives within this Major Research Theme include:

- To enhance and build interdisciplinary networks of researchers, from within and external to Saint Mary's University, to foster research in finance to help develop an in-depth understanding of financial markets and the decision-making processes to optimize corporations' interaction with their environment and enhance investor's education.
- To maintain a national leadership position in Industrial/Organizational (I/O) Psychology and Human Resource Management, recognizing its vital importance to a knowledge-based economy and Saint Mary's record of excellence in these fields.
- To enhance and develop research targeted at psychological health in the workplace, with particular attention to job-related stress, coping mechanisms, burnout, and balanced living strategies – areas that have emerged critically through the COVID-19 pandemic restrictions.
- To enhance and build interdisciplinary networks of researchers, from within and external to Saint Mary's University, to foster research on information systems and technology that will help local, regional, and national businesses and entrepreneurs to succeed in the marketplace.
- To support and enhance knowledge translation to transfer new research findings in *Business and Workplace Studies* to academic and business communities locally, regionally, nationally, and internationally.

Canada Research Chairs Program

The assignment of CRCs within Saint Mary's University is the responsibility of the Vice-President Academic & Research (VPAR), and alignment with one of the SRP Major Research Themes has been – and remains – a key element is the determining the disciplinary focus when replacing a vacant Chair. With this 2021 renewal of the SRP, not only is there a shift in the definition of the Major Research Themes compared to the earlier 2012 SRP, but there is also a newly defined process for guiding the VPAR's decision regarding filling vacant Chair; this new process is outlined in the Canada Research Chair Equity, Diversity and Inclusion (EDI) Action Plan (<https://www.smu.ca/webfiles/SMU-CRC-Action-Plan-June2020.pdf>), and takes advantage of the flexibility of Tri-Agency association provided by SMU's assignment of "special" Chairs and the allowance of Flex Chairs by the Secretariat. The new process allows a call for SMU departments/programs/faculty groups to propose a Chair in a discipline aligned with the SRP Major Research Themes and support the University's EDI goals within the CRC program and the academy. This process will remain informed by the University's development of a Diversity Strategy and ensure consultation with the recently created role of Associate Vice-President, Diversity Excellence. The Table of current CRCs below provides the connection for each Chair to the Major Research Theme under which they were appointed (under the 2012 SRP) and their alignment with the Themes herein in the 2021 SRP.

Table of Current Canada Research (CRC) status (as of February 2022)
note: Chairs normally complete 2 terms before becoming vacant-for-filling

Chair Level	Utilization by Agency	Research Field - 2012: SRP Major Theme - 2021: SRP Major Theme	Status
Tier II	SSHRC	International Development Studies - 2012: International Development & Human Migration - 2021: Modern Global Citizenship Issues – Migration, Development, Big Data	2 nd term (2017-22)
Tier I	SSHRC	Occupational Health Psychology - 2012: Innovation in Business & Workplace Studies - 2021: Innovation in Business & Workplace Studies	2 nd term (2015-22)*
Tier I	NSERC	Astrophysics - 2012: Astronomy, Computational Sciences, & Subatomic Physics - 2021: Innovative Science – Exploring Fundamentals, Developing Applications	1 st term (2017-23)*
Tier II	SSHRC	Atlantic Canada Studies - 2012: Atlantic Canada Communities - 2021: Connecting to Communities – Engaging, Partnering, Supporting Atlantic Canada communities	2 nd term (2021-25)
Tier II	NSERC	Sustainable Chemistry and Materials - 2012: Environment and Natural Resources - 2021: Innovative Science – Exploring Fundamentals, Developing Applications	2 nd term (2021-26)
Tier II	NSERC	Organic Geochemistry and Marine Research - 2012: Environment and Natural Resources - 2021: Innovative Science – Exploring Fundamentals, Developing Applications	2 nd term (2021-26)
Tier II	SSHRC	International Finance and Competitiveness - 2012: Innovation in Business & Workplace Studies - 2021: Innovation in Business & Workplace Studies	1 st term (2017-22)
Tier II	NSERC	Astrophysics - 2012: Astronomy, Computational Sciences, & Subatomic Physics - 2021: Innovative Science – Exploring Fundamentals, Developing Applications	1 st term (2017-22)

* Chair lost in 2020 reallocation exercise, and will not be renewed/replaced.