

Strategic Research Plan 2015 – 2020

OFFICE OF RESEARCH SERVICES, INNOVATION AND ENTREPRENEURSHIP (ORSIE)





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Introduction

Durham College (DC) aims to be a premier post-secondary destination for students who succeed in a dynamic and supportive learning environment. Applied research plays a substantial role in enriching the student learning experience by broadening and deepening the experience of faculty and enhancing the curriculum for students; while increasing the college's contribution towards the socioeconomic needs of the community.

In the [2014-2017 Strategic Mandate Agreement](#), both the government and the college committed to working together to drive creativity, innovation, knowledge, and community engagement through teaching and research.

The [Durham College 2013-2016 Strategic Plan](#) includes a commitment to increasing opportunities for students to gain real-world professional experiences through applied research projects. As well, it recognizes the advancement of innovation and research through collaborations with small and medium-sized enterprises (SMEs) which benefit the economic prosperity of the community.

The value of experiential learning, applied research and community partnerships is articulated in another key strategic document, Academic Direction. Applied research and social innovation projects are fundamental to experiential learning opportunities where students develop transferable skills. During consultations to inform the development of this Strategic Research Plan, both faculty and students ranked the college's commitment to research as the number one research strength and the integration of research into the curriculum as number two.

Since the founding of the Office of Research Services, Innovation and Entrepreneurship (ORSIE) in November 2009, Durham College has initiated and supported a variety of research activities. To date, the college has received \$7.22 million in research funding, and for the last two years has been ranked as one of Canada's Top 50 research colleges. In 2011, the first Strategic Research Plan was implemented to guide the college's research and scholarly endeavours. This allowed us to integrate discovery and innovation into the academic environment and begin to establish a research infrastructure. During this time, a number of foundational elements were established including a research policy framework, a process for research ethics approval, a means for the financial and project management of research projects and various research-related professional development activities. The successes and outcomes from the college's support of research activities are highlighted each year in an ORSIE annual report.

Six research priorities were initially identified in the original Strategic Research Plan with the majority of research efforts over the past four years falling under the information and communication theme, closely followed by the science and technology, renewable energy and sustainable technology sectors.

The primary goal of this Strategic Research Plan is to continue to expand our research capacity by leveraging the college's current strengths in applied research as well as build on areas that could benefit from further development and address unmet needs. Within this framework, the college's research endeavours will link to the community and support economic development and social innovation through excellence in research and scholarship.

The Strategic Research Plan is integrated with institutional strategic documents that support the vision and mission of the college and is based on the following guiding principles.





Guiding Principles:

1. Collaborative partnerships and multidisciplinary approaches to research questions create synergies and have the greatest impact.
2. Engaging students in research activities provides unique and relevant contextual learning and builds their research skills.
3. Research and intellectual engagement supports professional currency of faculty and informs curriculum development.
4. Research inspires creativity and supports the economic, cultural and social development of the community.
5. Research held to the highest standard and the spirit of inquiry is fundamental to the academic enterprise.
6. Research and teaching are intrinsically linked and complementary.
7. Enhancing access and sharing the results of research through improved technology transfer, knowledge mobilization and translation maximizes the benefits to society.

Reflection of our community

An extensive Strategic Research Plan consultation process was conducted with various opportunities for faculty, staff, students and external partners to discuss their research goals, challenges, and thoughts on the priorities for the coming years. Groups that provided input included the Research Advisory Committee, faculty and staff, Faculty Research Liaisons, students, and external partners through focus groups and an online survey. Members of the greater Durham College community also had the opportunity to share their feedback directly with ORSIE staff.

The 2015-2020 Strategic Research Plan is a reflection of the feedback, inspired by the community and designed to encapsulate the emergent overarching themes. The purpose of this plan is to articulate an overall strategic vision for research excellence across the college which balances priorities with flexibility to accommodate new directions and opportunities.

From the consultations we heard that research was important to the majority of faculty, students and external partners. Nearly 90 per cent of students identified research as an opportunity to participate in experiential learning opportunities that would better prepare them for employment. It is these students who, upon graduation, contribute to the local economy and raise the profile of the college. For the faculty, research was identified as a mechanism to keep their knowledge current and re-engage their interest. Research also promotes entrepreneurial activity, a recently announced government priority.

Research Themes

While Durham College encourages research across all schools, we recognize the importance of focusing our research activities and resources on strategic themes. These themes align with our academic programs, integrate with the college's research capabilities and support local industries including SMEs, community services, businesses and organizations. While multidisciplinary, they also reflect the college's strategic priorities, proposed growth and diversification.



Cultivating Healthy Lives and Resilient Communities

Areas of research under this theme will focus on developing a greater understanding of health and well-being covering the lifespan of the individual and extending to the collective level of the community. From children to youth to older adults, the many aspects of health will be explored including the impact of social, environmental and economic determinants. This research theme is characterized by interdisciplinary approaches and the interplay of health, social services, biotechnology, information technology and engineering for the improvement of health and the betterment of the community.



Advancing Agriculture, Agri-business and Tourism

In 2013, Durham College celebrated the opening of the Centre for Food, a state-of-the-art learning facility where the field-to-fork concept was integrated into a diverse range of programs. As the result of recent investments in research infrastructure, the college is well-positioned to make significant and unique contributions to sustainable food production and to support agri-business and tourism industries.

Research Themes



Enabling Technologies of the Future

Technology is ubiquitous in people's lives and continues to be transformative in areas such as science and sustainable energy. The college has research strength and expertise in this area where respective information, communication, media, computer science and digital technologies converge. Prototypes and applications across all sectors rely heavily on collaboration and drive the development and commercialization of new technology.



Enhancing Scholarly Teaching and Learning

Fundamental to the college is the teaching and learning experience. A wide range of research activities has been implemented and valued from both a scholarship perspective and practical impact. Areas of inquiry span all disciplines as knowledge about teaching effectiveness, student learning and the role of technology continues to improve accessibility and learning capabilities for students.

Strategic Research Objectives:

Over the next five years, Durham College is committed to achieving the following major research objectives.

- Encourage, foster, promote and sustain excellence in all aspects of research.
- Communicate the research potential, leadership capabilities and college's commitment to research.
- Expand outreach efforts to develop strategic research alliances and networks, which support collaborations across industry sectors.
- Enhance existing areas of research strength and demonstrated expertise and take advantage of new opportunities in emerging areas with high impact.
- Integrate applied research and entrepreneurship into the curricula to enhance the student learning experience.

Performance Metrics

Durham College will measure applied research success to demonstrate the progress of the objectives through an annual report on the effectiveness of the Strategic Research Plan. Quantitative measures will include the number of projects per year, faculty engagement as principal investigators or co-investigators, student engagement in projects, number of research partners, dollars, and in-kind investments of funded research. Qualitative outcomes will also be included such as the impact of completed projects, incorporation of research into the curriculum, and the results of commercialization and knowledge transfer.

This is a five-year Strategic Research Plan, which recognizes the dynamic nature of research. It is a living document to be regularly reviewed and updated as necessary with a complete re-examination at the end of the five years.



