

Strategic Research Plan 2010 – 2015 Summary

Introduction

Teaching, research, and service to the community are essential and interrelated elements of the mandate of the University of the Fraser Valley (UFV). UFV faculty and students are committed to conducting research of the highest quality, meeting or exceeding scientific and professional standards. They are actively involved in various types of research, scholarly, and other creative activities in numerous disciplines. The University supports individual and collective research in all of its program areas and strongly encourages multi-disciplinary research. At UFV, teaching and research are intimately related, and the present plan seeks to enrich the learning experience of our students and create as many opportunities as possible for them to be actively involved in and learn through research.

The three major strategic goals adopted by the University of the Fraser Valley are to:

- Provide the best undergraduate education in Canada
- Be a leader of social, cultural, economic, and environmentally responsible development in the Fraser Valley, and
- Be innovative, entrepreneurial, and accountable in achieving our goals.

In particular, the University is determined to offer programs which use the best pedagogical practices, informed by a commitment to current research and scholarship, and engage students actively in their education through opportunities for practical experience, research, problem solving, and creative work. Furthermore, priority is given to research that benefits the economic, social, and cultural development of the Fraser Valley.

The present plan supports the University's strategic goals by:

- Facilitating the integration of research and teaching and multiplying the number of research opportunities for students
- Promoting and supporting the research, scholarly, and creative activities of faculty members, and,
- Supporting and developing multidisciplinary and collaborative research programs in six main priority areas.

Major Goals and Objectives

1. Integration of research and teaching and increased research opportunities for students.

This objective will be achieved by:

- a. Supporting the development and implementation of research-based or inquiry-based curricula

- b. Encouraging innovative ways of integrating research and teaching
- c. Doubling each year, for three years, the number of opportunities for student involvement in research
- d. Increasing the number of paid research assistantships for students
- e. Supporting students' presentations of their research at academic and professional conferences.

2. Increased support for faculty members' research, scholarly, and creative activities.

This objective will be achieved by:

- a. Increasing faculty involvement and participation in research, scholarly, and creative activities
- b. Increasing faculty participation and success rates in seeking and securing funding from the major granting Councils as well as from other less traditional sources of research funding
- c. Ensuring that faculty have access to timely and useful information about research and research funding opportunities
- d. Pursuing research opportunities and funding in cooperation with industry and community partners
- e. Helping faculty increase their engagement in research and other scholarly activities by providing adjustments to their workload
- f. Supporting the dissemination and publication of the results of faculty research
- g. Enhancing technological and information resources, including library collections, in support of research and scholarly activities.

3. Substantial increase of multidisciplinary and collaborative research programs and activities within six priority areas.

This objective will be achieved by:

- a. Increasing institutional support for research in the six priority areas
- b. Identifying and actively pursuing research opportunities for collaborative research
- c. Entering into strategic partnerships, locally, nationally and internationally, with academic and research institutions, governments, and the private sector
- d. Strengthening the role and capacity of the University's research centres and institutes as practical vehicles for interdisciplinary collaboration.

Priority Areas

UFV has identified six priority areas in which it will strive to develop its research capacity and output. These priority areas reflect the University's research strengths and its intention to align its research and scholarly activities with its commitment to student learning and community development.

The six priority areas listed in alphabetical order are:

- Citizenship, Culture, Governance, and Human Rights
- Crime Prevention and Criminal Justice
- Environment and Sustainable Development

- Human Development, Health, and Well Being
- Molecular Science
- Scholarship of Teaching and Learning

1. Citizenship, Culture, Governance and Human Rights

UFV recognizes and values the diversity of the peoples of the Fraser Valley and will continue to partner with various communities and organizations to pursue research in the areas of culture, citizenship, and human rights.

2. Crime Prevention and Criminal Justice

UFV will continue to prioritize research in the area of crime prevention and criminal justice. That research will be conducted with a variety of partners at the local, regional, national, and international levels.

3. Environment and Sustainable Development

The Fraser Valley has a diverse and cherished natural environment. The Valley is also one of the most important agricultural regions of the country due to its relatively mild climate and fertile soil. At the same time as agricultural production is intensified, the Valley's population is growing faster than almost anywhere else in the country. This raises some very important challenges in terms of sustainable development and the protection of the environment. Our research activities in the area of agriculture, social and economic development, sustainability, and food and water safety and security will be enhanced and accelerated.

A Tier II, Canada Research Chair has actively worked in this area and leads a substantially research program in the area of food security and the environment. This work is conducted through the UFV Agriburbia Research Centre and in collaboration with the agriculture-food industry, local and regional governments and other important stakeholders.

UFV conducts significant research in this area from the broad perspective of climate change research to berry production research in the Fraser Valley. UFV has the only Luminescence Dating Laboratory in western Canada where research on changes in past environments help understand trends in climate change. Students at the undergraduate, masters, and doctoral levels actively participate in their faculty research and/or their own research projects.

UFV supports research across disciplines in this area and encourages collaboration with other institutions, governments, and other organizations. Research is conducted on watershed management, regional aquifers, preservation of water resources, streams and rivers, agricultural impacts, invasive plants, and greenhouse pest control.

A major goal of the UFV Strategic Research Plan is 'facilitating the integration of research and teaching and multiplying the number of research opportunities for students' because at 'UFV, teaching and research are intimately related, and the present plan seeks to enrich the learning experience of our students and create as many opportunities as possible for them to be actively involved in and learn through research.'

UFV is an employment equity employer, and especially invites applications from women, Aboriginal persons, visible minorities, and persons with disabilities to apply for positions at UFV.

4. Human Development, Health, and Wellbeing

Human development, health, and wellbeing will remain a priority research area for the University. This will build on the work of faculty from Kinesiology and Physical Education, Health Sciences, Psychology, Social, Cultural and Media Studies, the Centre for Education and Research on Aging, and the Centre for Social Research.

Health and wellbeing is becoming a major area of research in local and regional communities in the Fraser Valley for a number of reasons. For the past 30 years, the Fraser Valley has experienced significant population growth in all age categories as young families seek affordable living (compared to the Greater Vancouver region), seniors and retired people from across the country seek a warmer climate, immigrants seek new homes, and indigenous peoples seek a better life for their young people as their population rate is increasing substantially faster than the rest of Canada's population.

This growth has resulted in serious health / community issues including high suicide rates of indigenous youth, high diabetic rates in ethnic populations, high mental health and addiction rates, high rates of gang violence, and all health aspects of a growing elder population.

UFV will be establishing a Tier I Canada Research Chair in Health and Community to help address many of these health issues in the Fraser Valley.

5. Molecular Sciences

Molecular sciences is a multidisciplinary and interdisciplinary field where physics, chemistry, biology, mathematics and statistics and computer science merge in a cooperative effort to better understand properties of subatomic, atomic, molecular, and supramolecular systems and their technological potential. It is a growing area of experimental and theoretical research at UFV, with collaboration at the regional, national, and international levels.

Research in this area is conducted in:

- Molecular biology and genetics
- Chemistry and biochemistry
- Molecular modeling and bioinformatics
- Atomic, molecular, and optical physics
- Subatomic physics

6. Teaching and Learning

UFV attaches a great importance to the scholarship of teaching and learning. Student involvement in inquiry learning and research provides unique opportunities for students to develop and acquire essential skills including analytical thinking, critical thinking, an ability to relate practice to theory, and communication skills. Gathering evidence of the effectiveness of

new pedagogical methods and technologies is essential for achieving the University's strategic goals.

Planning and Approval Process

The present plan was developed in consultation with the University's Research Advisory Council and all Faculty Councils and was approved by the Senate and the Board of Governors.

Assessment of the Plan

Each of the three major goals and related objectives of the present five-year plan will produce measureable outcomes and will be reviewed and assessed every year over the five year period.

Our goal of integrating research and teaching and increasing research opportunities for student involves five main objectives. Indicators of successful achievement of these objectives include the number of new courses developed to maximize the integration of research and teaching, and the number of students involved in research activities, publishing in peer reviewed journals, presenting at conferences, and applying for and being awarded graduate scholarships.

Eight objectives are identified in support of our goal of increased support for faculty members' research, scholarly, and creative activities. The indicators used to measure progress in achieving these objectives will include the number of successful applications to national granting councils and other research funding organizations, the number of studies published in refereed publications, peer-reviewed monographs and books, the number of presentations at academic and professional conferences, and feedback received from community partners.

The third major goal of realizing a substantial increase in multidisciplinary and collaborative research programs and activities within six priority areas will be measured in terms of the quality and quantity of the research collectively produced in these areas.