

Vancouver Island University Strategic Research Plan

Institutional Context

Vancouver Island University (VIU) is a dynamic institution dedicated to excellence in teaching and learning, service and research. VIU was established as a Community College in 1969, when it offered university-transfer programs and two-year diploma programs. The institution was granted university-college status in 1989 as Malaspina University-College, offering university baccalaureate degrees in association with the University of Victoria, given independent degree-granting status in 1995, and in 2000 was accredited by the Association of Universities and Colleges of Canada (AUCC). In 2008 Malaspina University-College was conferred full university designation and renamed Vancouver Island University. The provincial government's mandate is for VIU to undertake applied research that is applicable to the needs and priorities of the region.

In 2010, VIU released its Academic Plan which was developed to highlight specific priorities, to direct academic activities towards common goals, and to define the infrastructure and resources required to achieve those goals. These priorities, goals, and resource needs are informed by VIU's Statement of Purpose:

... Vancouver Island University supports the well being of the people of Vancouver Island and coastal British Columbia by promoting a high quality of life for their communities through commitment to student success, community engagement and associated scholarship...

The Academic Plan also defined VIU's Visionary Goal, which is to:

... inspire our students and the people of Vancouver Island and coastal British Columbia as a trusted educational partner in the search for sustainable cultural, economic, environmental and social prosperity.

The Academic Plan sets clear goals for expanding scholarly activity beyond the traditional emphasis on teaching, and to support the ability of faculty to undertake research activities in a meaningful and timely fashion. It affirms the important role of research and scholarly activity centres as *important strategic and operational mechanisms for focussing VIU's expertise and building institutional synergy, visibility and credibility.*

VIU's research mission is to engage faculty and students in inquiry, enhance teaching and learning, advance disciplinary knowledge, and encourage interdisciplinary interaction among faculty and students. The integration of undergraduate researchers into planning, experimentation, compilation and dissemination of the nationally and internationally recognized research conducted by VIU faculty is vital to the development of critical thinking and assessment skills and the ability of young students to cope with complexity in a challenging world.

Economic shifts have had a substantial impact on the region's traditional resource-based industries like logging, fishing and mining. The region has seen demographic shifts with former residents migrating to urban areas in search of employment, and a growing population of retirees and outdoor recreation enthusiasts attracted to the region's temperate climate. These factors create needs and opportunities for research on social and mental well-being and resilience, healthy aging, chronic illness management, and physical activity across the life course. In addition, coastal communities are looking for ways to protect their economic livelihood in sustainable ways, in areas that include tourism and different resource-based industries such as aquaculture. As a result, research at VIU is necessarily interdisciplinary,

addressing the complex human, social, environmental, ecological, and economic forces interacting on the region in which the university is embedded. For research purposes, this complexity ranges across many disciplines, and addressing these challenges typically calls for integrated models which draw on expertise found in many parts of the institution. The areas of institutional strength are by themselves highly interdisciplinary, and not discrete silos of research activity. Formal and informal interaction between these areas, and with the community and industry partners, is a further testament to VIU's priority to cultivate interdisciplinary research and knowledge mobilization.

Principles and Objectives of the Strategic Research Plan

Through the principles below, VIU is committed to:

- research of the highest national and international standards;
- research expressing the intrinsic relationship with teaching, learning, and the educational experience in general;
- active participation of both undergraduates and graduate students in research and scholarly activity;
- research reflecting broad interdisciplinary opportunities;
- integrated research focusing on areas of institutional strength and expertise;
- research that reflects VIU's commitment to partnership with Aboriginal communities and local residents, and
- independent research beyond the parameters of this research plan.

The general objectives of the research plan are:

- to support undergraduate student success through research activity;
- to initiate new graduate programs consistent with the institution's areas of strength;
- to encourage cross-disciplinary research networks in keeping with the size and character of the institution;
- to encourage research dissemination and interaction through participation in and the hosting of research conferences, workshops and symposia;
- to recruit and retain faculty with a commitment to undergraduate teaching who t undertake active research programs and community leadership;
- to promote linkages between research and teaching and learning;
- to support and enhance research opportunities in areas of strategic importance to Vancouver Island University communities;
- to identify processes to enhance the participation of Aboriginal partners in identifying research priorities;
- to develop local partnerships that integrate research activities within new and existing community programs and facilities, enabling research and learning opportunities as well as knowledge mobilization;
- to develop regional, national, and international partnerships and collaborations with other universities, government, and industry contributing to research and learning environments at VIU; and
- to enhance faculty research involvement through institutional support, assistance with the acquisition of external funds, and the provision of suitable space.

As a new university, VIU has focussed on harnessing public and private sector resources to establish focused research centres and Research Chairs to further the institution's strategic research goals. In the last eight years, more than 20 million dollars have come to VIU from government and private-sector sources to create research facilities and to establish research centres and, in the last five years, four Research Chairs have been established. This carefully

focused strategic expansion of research facilities, research centres, and Research Chairs serves to increase the visibility and productivity of VIU's research programs, and to provide tangible benefits to research consumers. These factors continue to strengthen VIU's ability to obtain funding from research grants and industry partnerships.

Research Chair Allocation

Research Chairs are key positions to enhance research and research training in areas of institutional priority. In the selection of a Chair area or a Chair candidate, the Research Chairs Strategy Committee considers, among other things, the ability of the Chair to: provide leadership in the institution and community; build external collaborations and partnerships; strengthen relationships with teaching and learning; and enhance an area of institutional strength consistent with regional relevance.

VIU Research Chair Allocation

Chair Type	Chair Area	Tier	Research Discipline	Granting Agency	Area of Institutional Strength
Canada Research Chair (CRC)	Exercise and Respiratory Health	2	Health and Chronic Disease	CIHR	Healthy Communities
Canada Research Chair (CRC)	Coastal Resource Management and Policy	2	Urban and Regional Studies, Environmental Studies	SSHRC	Coastal Resources, Management and Policy
Canada Research Chair (CRC)	Shellfish Aquaculture Ecosystem Interactions	2	Evolution and Ecology	NSERC	Integrated Sciences and Environmental Research
BC Regional Innovation Chair	Early Childhood Development	2 ^a	Aboriginal Studies	BC LEEF	Aboriginal Community Engagement
BC Regional Innovation Chair	Tourism and Sustainable Rural Development	2 ^a	Tourism Management	BC LEEF	Healthy Communities

VIU has taken leadership in addressing the issue of gender representation in CRC nominations. It is our policy to split Tier 1 Chairs into two Tier 2 Chairs which we believe are a better fit with VIU and with achieving gender equity. Our current CRCs have an equal gender split, while the two BC Regional Innovation Chairs are female. Our most recent CRC nominee is male.

Research Priority Areas and Institutional Strengths

In keeping with its Statement of Purpose and Visionary Goal, VIU supports key research areas through investment in research leadership and capital projects aimed at facilitating research activity and visibility within the university and surrounding community. Six major research themes at VIU include:

^a Equivalent to Tier 2

Healthy Communities. Research to support healthy communities considers human health, social well-being, the environment and sustainability. The Academic Plan identifies issues that will be critical to communities on Vancouver Island and coastal British Columbia and recognizes the importance of productive partnerships that *explore a viable future* by, for example, *understanding regional demographic changes, understanding an aging population, identifying future health and human services, encouraging terrestrial and aquatic agriculture and food security, and promoting tourism and recreation.*

The CRC in Exercise and Respiratory Health will play a fundamentally important role in investigating factors that influence and promote health and wellness through research, knowledge mobilization and community education, with a particular focus on healthy aging, and interventions to manage chronic illness, in order to address a critically important need arising from the demographic profile of the region. Underscoring the institutional commitment to this research theme, the Academic Plan outlines steps to be taken towards the development of a new Health and Wellness Centre that will include expanded customized laboratory space for the CRC's research. The Health and Wellness Centre has also been included in the University Master Plan.

There are several Faculties at VIU that actively engage researchers and community members in health research. For example, the Psychology Department within the Faculty of Social Sciences, including the Behavioural Medicine Lab, the Fear and Anxiety Lab, the Electrophysiology Lab, a Sleep and Neuroscience Lab, and the Resilience Research Lab, have all forged local community ties to examine a wide spectrum of health and community-based research questions. The close integration of the VIU Nursing program with the Vancouver Island Health Authority, and within local clinical settings, has readily facilitated health research by students and faculty, and dissemination of research findings. In addition, the Faculty of Education has recently developed the Sport, Health, and Physical Education (SHAPE) initiative to prepare undergraduates in studying physical education to promote physical activity, sport, and healthy lifestyles. The CRC in Exercise and Respiratory Health will lead novel, important and regionally- and globally-relevant research in this exciting research environment which has begun to attract top research talent.

VIU recognizes that the health of a community is determined by many factors that require a broad multidisciplinary lens and innovative research approaches. The Community Based Research Institute fosters and coordinates community based research activities in health, well-being and development, and family, community or social issues to complement established curriculum and learning experiences throughout the campus. VIU is also proud to be home to the British Columbia Regional Innovation Chair in Tourism and Sustainable Rural Development. This Chair examines community identification and the nature of rurality as rural communities transition from primary industry (forestry, fisheries, mining) to tourism and conservation and/or preservation.

Integrated Sciences and Environmental Research. VIU has continuously promoted the development of research centres that provide the necessary synergistic atmosphere in which scientists and technologists from different fields can use new approaches to tackle complex issues. Through these research centres, VIU has developed expertise that is both regionally-relevant and internationally significant. They include:

a. Applied Environmental Research Laboratories (AERL) -The AERL is a nationally funded state-of-the-art research facility whose researchers develop new and improved measurement strategies for real-time chemical analysis of determinants of environmental and human health. The work is on the leading edge of an evolution in bringing high precision chemical measurements to the sample rather than bringing 'grab samples' to the lab. The facility supports training from undergraduate to post-doctoral levels. This work involves collaborations

with numerous regional, national and international partners in academia, government agencies and the private sector.

b. Centre for Shellfish Research (CSR) - The CSR facilitates the development of a vibrant science-based shellfish aquaculture industry as an economic engine to revitalize economies throughout BC coastal and First Nations communities. With major infrastructure funding from the Canada Foundation for Innovation (CFI), British Columbia Knowledge Development Fund (BCKDF) and Western Economic Diversification, as well as other public and private funders, VIU has built a research centre on campus, as well as the Deep Bay Marine Field Station, one of the greenest buildings in Canada, in the heart of the shellfish industry. These capital investments, along with productive collaborative partnerships between industry, communities, government and academia, and the recent establishment of a CRC in Shellfish Aquaculture Ecosystem Interactions, have led to a vibrant research program that advances knowledge globally while meeting regional needs.

c. International Centre for Sturgeon Studies (ICSS) - Sturgeon have a worldwide reputation as a premium food product (caviar and flesh) and an exceptional sport fish, and they attract considerable public appeal as “living fossils”. White sturgeon aquaculture in BC began in 2001 when VIU (then Malaspina University-College) spawned captive broodstock and supplied eggs to the first commercial operator. The new ICSS R&D facility, funded by CFI, BCKDF and others at VIU’s Nanaimo campus, will be operational in early 2011, supporting peer reviewed research with outcomes that can be applied in support of both sturgeon conservation initiatives and aquaculture development. By hosting the World Sturgeon Conservation Society North America Chapter meeting in 2011 and the International Sturgeon Symposia in 2013, the ICSS will be well-positioned to become the knowledge and innovation hub for sturgeon in BC, supporting the conservation and restoration activities currently underway as well as facilitating economic development.

Coastal Resources, Management and Policy. Questions of social and economic impact and appropriate governance are intrinsic to research into the sustainable management of resources in a changing economy. For example, a study of the social-ecological interactions of shellfish farming must take into account federal, provincial, local, and First Nations jurisdictions and perspectives on aquaculture, marine protection, and other uses of the coastal zone. VIU has a strong reputation for coastal resource management and policy research, which is an area well-suited to the setting, history, and character of the institution. This priority theme enables enhanced interdisciplinary research with a focus on promoting the resilience of coastal communities. Much of this research involves collaboration with regional resource-based industries, coastal communities, and First Nations, as well as ongoing exploration of new economic opportunities.

VIU has supported this research theme by hiring a CRC with a vast network of partners, and by developing major infrastructure projects that create high visibility and presence within the community. The CRC in Coastal Resource Management, for example, examines the social-ecological systems in which Canadian coastal communities are embedded and plays a key role in research, dissemination and knowledge transfer in these areas. VIU’s Institute for Coastal Research (ICR) conducts internationally respected, research to understand and promote the resilience of coastal communities of BC and the Pacific Northwest. The construction of the ICR, which also houses VIU’s Research and Scholarly Activity Office, and includes dedicated office space for CRCs and research assistants and purpose-built common spaces for research meetings and presentations, has created a visible hub of research interactions on campus.

Aboriginal Community Engagement. Maintaining a strong Aboriginal student population and actively engaging First Nations communities are fundamentally important goals of VIU. The strength and capacity of First Nations communities are investigated in varying ways, such as the historical influence of health professions; approaches to contextual intervention; and child,

youth, and family resilience. As part of its commitment to Aboriginal Community Engagement, VIU has recently hired a British Columbia Regional Innovation Chair in Aboriginal Early Childhood Development (ECD). Working in conjunction with Aboriginal communities and ECD providers, the Chair is developing a research strategy to investigate the current state of Aboriginal ECD training programs with the ultimate goal of ensuring that Aboriginal ECD programs are consistent with traditional language, culture and values.

Cultural Communication and Expression. This research area intersects new technologies and fields emphasizing cultural communication and expression. The Heritage Research Group is an interdisciplinary collective of five humanities scholars, formed under the auspices of the Alexandro Malaspina Research Centre. These scholars are involved in research related to Canadian heritage and its impact on memory, identity, society and nationhood. Capital investment further complements this important research theme: the Media Research Lab, created with funding from the CFI and BCKD, works to adapt and advance computing techniques in humanities scholarship and pedagogy.

The Scholarship of Teaching and Learning. The traditional focus on undergraduate education has enabled VIU to develop great strength in teaching and learning. Research in the scholarship of teaching and learning is an emerging area, with a commitment to excellence in teaching practice and the systematic investigation and enhancement of pedagogical approaches to the advancement of learning. VIU was the lead institution in a Carnegie Academy for the Scholarship of Teaching and Learning (CASTL) international project on Undergraduate Research, and was the first Canadian site for a meeting of the Council on Undergraduate Research Institute in 2008.

Inter-Institutional and Inter-Sectoral Collaborations

VIU maintains several ongoing formal institutional partnerships with other universities in Canada and abroad, and has developed strong and effective working relationships with other post-secondary institutions in British Columbia as a member of regional and provincial university organizations. VIU has partnered with other research centres such as the Bamfield Marine Sciences Centre universities consortium, the Pacific Biological Research Station (Nanaimo) and the Centre for Coastal Health, as well as government agencies, First Nations communities, and private resource-based industries leading to shared research ventures, industry training programs, and the shared use of resources. VIU is closely integrated with community organizations and settings such as the Vancouver Island Health Authority and Nanaimo Regional General Hospital, and it is located adjacent to state-of-the-art community fitness facilities managed by Nanaimo Parks and Recreation.

Assessment of Success in Meeting Research Objectives

The Vice-President, Academic is responsible for overseeing assessments of the institution's success in meeting the objectives of the Strategic Research Plan, and for periodic reviews of the Plan. Assessment and review are based on information provided by faculty, Deans, and the Director of Research Services. Areas of institutional strength and CRC programs will be assessed for success at a local, national and international level, based on criteria that include: scholarly output, research grants and contracts, community engagement, industry partnerships and commercialization of IP, research collaborations and networks, gender representation among Research Chairs, student/trainee engagement and advancement in research careers, research capacity (faculty and infrastructure), and recognition (faculty and student awards). The success of the Strategic Research Plan will also be assessed against the broader objectives of VIU's Academic Plan, with the aim of maintaining and expanding the prominence of research activity within the University.

Planning and Approval Process

The Strategic Research Plan is part of VIU's regular strategic planning process, culminating in an annual revision of the Institutional Service Plan, which drives other processes, such as the institutional capital planning process, and is a requirement of the BC Ministry of Advanced Education. Strategic planning is subject to internal review at the Faculty and Department level, in senior administration committees (Management and Executive), and in institutional governance bodies (Board, Senate). The institution's performance is measured annually against the Strategic Research Plan, Academic Plan, and the Service Plan.