

Simon Fraser University

Faculty of Health Sciences

Highlights from the Three-Year Academic
Plan

2010- 2013

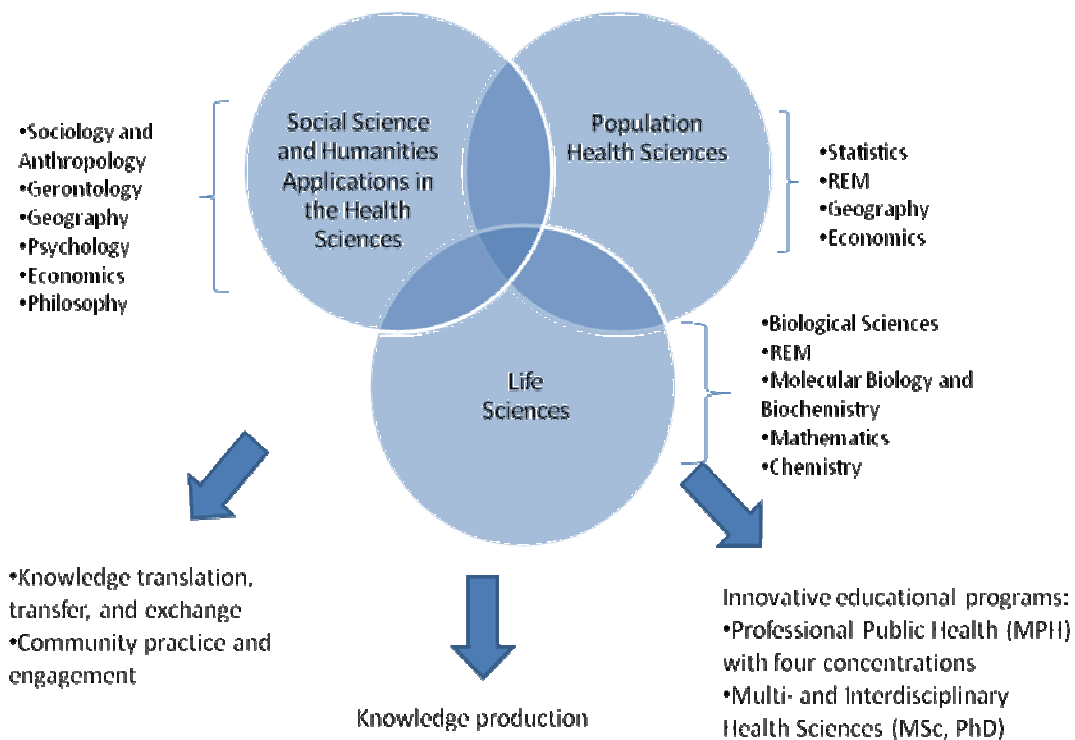
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1. Faculty Core Activities

1.1 Overview

Established in September 2004, the Faculty of Health Sciences (FHS) at Simon Fraser University (SFU) is one of Canada's most integrated programs in the health sciences. This unique Faculty endeavors to integrate social and natural science research with population outcomes, societal application and policy analysis, combining a broad spectrum of research approaches, methods of inquiry, levels of analysis, and research perspectives.

Researchers and students from disciplines as diverse as molecular biology, epidemiology, geography, political science and anthropology, work together on studies spanning everything from the *cell to society*. Both researchers and students make original contributions to the study and understanding of health and disease, placing Simon Fraser University at the forefront of multi-disciplinary health research and teaching in Canada. Within this broad framework, the areas of programmatic and research specialization in the Faculty can be summarized visually as follows:



Initial programming in the Faculty focused on population and public health. SFU addressed a national mandate to increase the country's capacity in public health research and training. It has done so with remarkable success, now enrolling approximately 70 public health students per year.

The FHS has been established with remarkable speed. During the past five years 34.5 new faculty have been recruited and in 2009-2010, 91 courses will be offered and 2144 undergraduate and 134 graduate students supported. During this past year the Faculty moved into a new building and opened new laboratory facilities. FHS continues to develop necessary infrastructure and administrative support, as well as capacity to support instructional development, communications and marketing, and fund raising.

Faculty governance has been enhanced through the development of an FHS constitution with related committee structures and functions consistent with SFU's policies relating to these matters. Given the youth and steep developmental curve of the Faculty, challenges remain with fully implementing and operationalizing all the processes and procedures needed to operate programs and administrative responsibilities.

1.2 Vision

*The research and teaching programs in the Faculty of Health Sciences **integrate social and natural science research with population outcomes, societal application and policy analysis.** This integration combines a broad spectrum of research approaches, methods of inquiry, levels of analysis and research perspectives. This unique approach will enable researchers and students to make original contributions to the study and understanding of health and disease and will establish Simon Fraser University at the forefront of multi-disciplinary health research in Canada.*

The Faculty of Health Sciences will be at the forefront of interdisciplinary health research and teaching in Canada, delivering high quality teaching, learning, research, and community service in a wide spectrum of academic disciplines.

1.3 Core Values

Core Value	Description
Educational Excellence	Provide our students with an excellent education that will make a difference in their lives and help them apply their learning to make a difference in the world. We encourage critical thinking, and intellectual creativity.
Ethics and Civility	Behave ethically, respect others' expertise, conduct our activities in an open, honest and transparent manner; and practice civility.
Academic Rigor, Integrity, Excellence	Intellectual integrity and collegiality; academic rigor, quality and excellence; integration of academic and research themes; and reciprocity among ourselves and our communities.
Breadth and Disciplinary Diversity	Value the diversity of skill sets and methodologies that our faculty possess and bring to their research and teaching.
Member Diversity	Develop a diverse Faculty that reflects the gender, cultural, and overall diversity of the students and communities we serve.
Community Collaboration	Collaborate with communities; adopt a community perspective; and embrace relationships and partnerships with external partners such as health authorities, the Ministry of Health, community boards and other advisory bodies.

1.4 Mission

The Faculty of Health Sciences will:

- *Support scholarship through the creation, advancement, application, transmission and preservation of knowledge, and the stimulation of critical and independent thinking.*
- *Engage in and support research that embraces an overarching, interdisciplinary approach and understanding of health, recognizing the interactions and relationships among multiple determinants of health, which include molecular mechanisms.*
- *Enable students to reach their full potential and become ethical, responsible and informed citizens through creating an intellectually stimulating and culturally vibrant environment.*
- *Employ effective, efficient, and innovative approaches to teaching, research, service and administration and participate as a valued partner in the social, cultural and economic life of the community.*
- *Create an integrative approach to the health sciences that is ideally greater than the sum of the approaches represented by each of the constituent disciplines.*
- *Engage with the community – both locally and globally – in the effective transfer and application of knowledge.*
- *Consider the pursuit of social justice as a central value in our scholarship and educational programs.*

1.5 Undergraduate Programs

SFU's Health Science degrees are multidisciplinary and innovative. Students examine the interactions between human biology and society, health and public policy, health and culture, health and the environment, and more. Faculty of Health Sciences undergraduate degrees provide multidisciplinary approaches to health, with attention to epidemiology, public and population health, and research. The B.Sc. includes studies in biology, chemistry, molecular biology, biochemistry, immunology, infectious disease, environmental health, and epidemiology. The B.A. draws upon the social, behavioural, and policy sciences, as well as biology, and focuses on the determinants of health, health promotion, disease prevention, health care systems, and health policy. Areas of study include global health, environmental health, mental health, and gender-based and other inequities in health.

This innovative approach produces graduates with a broad understanding of health and science who should feel comfortable working in a multidisciplinary environment. A BA or BSc degree will qualify students for graduate study, health professional programs, and careers working as members of multi-disciplinary teams and units in the health care system, a critically important need for the future of health care in British Columbia and Canada generally.

1.6 Graduate Programs

Our programs are rapidly evolving to meet the needs of current and future students, employers, and the Canadian health care system. The Faculty of Health Sciences offers graduate programs leading to the Masters of Science (MSc.), and Masters of Public Health (MPH) degree, and soon to the PhD. All of these programs are based on a common platform where students will participate in interdisciplinary seminars and interact with each other across the programs.

FHS' initial graduate programs have focused on the training of population and public health researchers and practitioners. FHS currently offers an MPH degree, currently under consideration for accreditation by the internationally-recognized Council on Education for Public Health (CEPH). The MPH degree is offered in four concentrations: environmental and occupational health; global health; population health (a generalist option); and social inequities and health. All MPH students complete a three month practicum in a population or public health setting. This activity engages the Faculty of Health Sciences with public health communities and stakeholders throughout Canada and around the world: About half of our MPH students choose to complete their practicum in low-to-middle income countries.

The MSc and (proposed) PhD programs are designed to provide students with content area expertise and guidance as they develop the skills and analytical and critical-thinking capabilities required to advance as independent health-researchers. Our goal

is to ensure that our graduates are prepared to practice, teach, and conduct research of the highest calibre in one of the identified research areas of the Faculty. Currently, advanced training is available in the following areas of research strength in the faculty, including (but not limited to): global health; environmental health and toxicology; epidemiology and prevention of cardiovascular disease, population and public health perspectives on mental health & addictions; the impact of social inequalities on multiple health outcomes; adolescent and children's health, health systems and policy, immunology, pharmacology, epigenetics, and interdisciplinary perspectives on infectious disease. Development of additional areas will naturally occur as the Faculty grows and matures.

1.7 Accreditation

The Faculty of Health Sciences at SFU is seeking accreditation of its public health programs (BA, BSc and MPH) by the Council on Education for Public Health (CEPH). We expect a decision in Spring, 2010. The Council on Education for Public Health (CEPH) is an independent agency recognized by the US Department of Education to accredit schools of public health and certain public health programs offered in settings other than schools of public health.

The goal of the Council is "to enhance health in human populations through organized community effort." The Council's focus is the improvement of health through the assurance of professional personnel who are able to identify, prevent and solve community health problems.

The following benefits, taken in part from the CEPH website, are just some of the many benefits of accreditation for FHS and SFU:

1. For the public, accreditation promotes the health, safety and welfare of society by assuring competent public health professionals.
2. For prospective students and their parents, accreditation serves a consumer protection purpose. It provides assurance that the school or program has been evaluated and has met standards established by and with the profession.
3. For prospective employers, it provides assurance that the curriculum covers essential skills and knowledge needed for today's jobs.
4. For graduates, it promotes professional mobility and enhances employment opportunities in positions that base eligibility upon graduation from an accredited school or program.
5. For faculty members and administrators, the accreditation process promotes ongoing self-evaluation and continuous improvement, and provides an effective system for accountability. It also ensures that the Faculty puts into place, and monitors, policies and procedures that enhance teaching and learning, research development and productivity, and community service.
6. Accreditation will enhance the national and international reputation of the Faculty of Health Sciences at Simon Fraser University.

1.8 Research

The research activities of FHS span the spectrum from applied community and health services to fundamental research carried out at the bench, with specific focus aligned with the program areas identified above. Research programs in children's health, mental health and addictions, population health, global health, health promotion and disease prevention, environmental and occupational health, and prevention of chronic and infectious disease have been established. Several integrative cross-cutting themes have also emerged as important strengths within FHS. The research collaborations are also building across other Faculties in the university. The diversity of research interests are a challenge for research infrastructure to keep up with that diversity. Interests in social inequities and health disparities, life course perspectives on the prevention and management of disease, and a concentration in addressing the needs of vulnerable communities provide collaborative opportunities both within FHS and across SFU. Emerging areas of research excellence with selected examples are represented visually below¹:



¹ Within each of these areas, other concentrations could also be identified that create cross-cutting themes. For example mental health and addictions, children's health, and epigenetics are examples.

Global Health and Vulnerable Populations

- understand the effects of racialization and social stratification on health; and design and evaluation of participatory, community-level interventions for promoting health equity.
- examine the impact of Mongolia's socioeconomic and political transition, in the context of increasing environmental hazards linked to climate change, on rural households
- understand social change through an examination of reproductive health in a globalizing world.
- investigate HIV/AIDS and Hepatitis C prevention and access to care among vulnerable populations with a particular focus on young people
- explore the ethical obligations in the areas of health worker migration, price gouging in the provision of medical services, exploitation in pharmaceutical testing, and markets in human organs.
- investigate the socio-economic dimensions of housing and health
- investigate the effects of pesticide exposures on fertility and pregnancies of young couples living in agricultural communities in China
- investigate community-based and empowerment approaches to mobilizing vulnerable communities for prevention of HIV/AIDS in India and China.
- investigate the challenges of women's reproductive health in a post-conflict, post/neocolonial setting.
- examine the effects that environment, health and social stressors on reproductive function in a group of Mayan women in the highlands of Guatemala
- investigate factors that promote self-determination in Indigenous health services.

Population Health Policy, Methods and Public Health Practice

- investigate policy, economic and social factors that influence the public health of disadvantaged populations in the community.
- explore comparative international health care systems and health care system reform, with a particular interest in comparative US/Canada health care policies.
- prevention and control of tobacco use, STIs and HIV/AIDS, and antibiotic resistance.
- provide research support to government ministries, health authorities, and community agencies in their efforts to advance the quality of mental health and addiction services.
- analyze data from specific cancer databases
- accommodate missing data in the modeling process
- address the determinants of health; preventing problems in children at risk; promoting effective services; and monitoring collective progress towards improving the mental health of all children
- understand mental health reform, service provision and access to health services
- examine interactions between addictions, mental health, primary healthcare, homelessness, and the corrections system.

- investigate the design and program evaluation of youth-led and school-based initiatives aimed at preventing mental disorders and promoting adolescent health.
- assess the feasibility and impacts of ‘public health’ measures for high-risk illicit drugs use (e.g., supervised consumption rooms, crack use paraphernalia distribution, etc.).
- analyze data from mental health studies (Alexythimia)

Environmental and Occupational Health

- examine the effectiveness of workplace health and safety committees in reducing the incidence of occupational accidents in the construction industry.
- examine fetal and early childhood exposures to prevalent environmental neurotoxins including lead, pesticides, mercury, alcohol, PCBs, and environmental tobacco smoke.
- investigate the molecular determinants of biological signaling pathways involved in chemical carcinogenesis and related toxicities.
- understand environmental health and population resiliency in human health effects of climate change
- investigate the role of air pollution from traffic and other sources on the progression of disease
- elucidate the molecular mechanisms involved in programming and re-modeling the epigenome; heritable traits that determine cell fate
- study how chromatin proteins carry out epigenetic regulation, which is the first step in turning genotype into phenotype
- investigate the interactions between environmental and genetic aspects of disease
- examine the relationship between housing and health

Infectious Disease Prevention and Control

- investigate the molecular basis for antigen recognition by antibodies using peptides as probes of these interactions
- examine use of antiretroviral therapy for prevention of HIV/AIDS in marginalized populations
- investigate the pathogenesis and evolution of MDV using the infectious bacterial artificial chromosome clones
- use molecular epidemiology methods to examine the contribution of human and viral genetic factors to HIV/AIDS disease progression and response to drug therapy.
- investigate anti-HIV antibodies and vaccine design

Chronic Disease Prevention and Health Promotion

- examine relationship between hypertension and sodium intake
- examine the global issue of hypertension as a risk factor for cardiovascular disease
- improve breast cancer health services
- investigate disparities across ethnic communities for cardiovascular disease.

2.0 Strategic Goals, Objectives and Activities

Goal One:

- *Complete the establishment phase of the FHS and develop a strategy to support its long-term sustainability.*

Strategic Objectives:

1. Complete the faculty recruitment plan to ensure achievement of broad goals and objectives

Activities

- Complete recruitment of Canada Research Chairs (Human Development and Health; Global Health) and Endowed Chairs (Information Sciences and Arthritis; Cancer Disparities; Prevention of HIV/AIDS).
 - Recruit three (3) junior lab scientists in areas of cellular neurobiology, genomic toxicology, and microbial ecology.
 - Recruit five (5) junior population health scientists with overlapping interests in areas of Faculty priority such as global health, indigenous peoples, health economics, and environmental ethics.
 - Explore opportunities for cross-appointments with other SFU Faculties and Departments to further expand diversity of faculty resources, consistent with recommendations in the Report of the Task Force on Faculty Re-Structuring.
 - Revise policy for incentive structure related to external salary support and teaching buy-outs to ensure high quality and innovation in course development and sustainability, consistent with the recommendations in the Report of the Task Force on Teaching and Learning.
2. Develop areas of continued innovation and collaboration across SFU

Activities

- Develop joint educational and research initiatives in health sciences with other Faculties at SFU.
- Explore opportunities for cross appointments for faculty and interdisciplinary degrees for graduate students.
- Explore opportunities for innovative health-related programming in collaboration with community partners and all SFU campuses.

3. Strengthen a supportive internal culture that encourages participation, respects diversity, and acknowledges limitations

Activities

- Establish formal opportunities to encourage and support interdisciplinary working and collaboration, in particular for faculty who may not otherwise cross paths
- Identify and implement innovative strategies that address the challenges of preparing new courses and programs in this small Faculty, including the development of new performance metrics and incentives.

- Formally recognize the efforts of faculty and students by establishing a FHS faculty/staff/student event that includes awards for teaching, research, service, mentoring, and community service.
4. Continue to develop and enhance opportunities for unique programming in FHS *Activities*
- Develop a strategy to make strategic use of the proximity to Vancouver and our position on the Pacific Rim (e.g. environmental living area that could be a living health lab)
 - Explore opportunities for research and education in Traditional Chinese medicine
 - Support SFU initiatives to strengthen partnerships in China, India and Southeast Asia
 - Complete the development of Indigenous Health program
 - Develop innovative strategy to recruit and appoint aboriginal faculty
 - Build partnerships and linkages with other BC university indigenous health faculty and programs
 - Strengthen linkages with Aboriginal programs in BC health care agencies
 - Develop linkages with other SFU programs in Indigenous Studies.
5. Continue to develop an Advancement strategy that supports areas of research excellence and support for faculty and student development. *Activities*
- Complete and implement a process for ethical review of advancement activities in FHS.
 - Continue to build long term relationships with friends and supporters of FHS
 - Identify and develop opportunities for external financial support of key professorships in areas of emerging excellence in FHS.
 - Develop and implement a strategy for philanthropic support of Global Health program with a focus on providing opportunities for international students from LMICs to undertake advanced training at SFU.
6. Develop a public relations and communication strategy aimed to increase the FHS's provincial, national and international reputation. *Activities*
- Enhance the FHS "identity" to help differentiate the FHS from other similar programs in Canada and internationally
 - Develop and implement a communications strategy using SFU-branded multimedia approaches (live, web, print, radio, television) to publicize key messages and recruit faculty and students in alignment with University-wide communication strategies.
 - Develop integrated internal and external communication vehicles to highlight faculty members' research, presentation of talks and posters at conferences,

- funding awards, and students' in-field practicums in Canada and internationally.
- Build an extensive 'experts' list by subject matter, linguistic capabilities, and target local, regional, ethnic, national and international communities and stakeholders.

Goal Two:

- *Continue development of innovative degree programs in the Faculty.*

Strategic Objectives:

1. Implement ongoing evaluation of the BA program
2. Implement ongoing evaluation and continued development of BSc
 - Activities*
 - Add new stream in Population and Quantitative Health Sciences.
 - Complete development of lab sciences curriculum
 - Monitor enrollment and plan for teaching demands on lab science faculty and departments in Faculty of Science
3. Undertake enrollment management and planning exercises to ensure that we have resources and capacity to fully support both programs given anticipated stability after several years of rapid growth
4. Ensure adequate training infrastructure for undergraduates, especially on the lab sciences side of the curriculum
5. Ensure successful roll-out of the MSc program
6. Secure approval and successful roll-out of the PhD program
7. Gain approval for the Graduate Diploma in Public Health Practice and introduce the first courses
8. Continue to improve the Practicum experience of the MPH students.
9. Complete the development of the MPH concentrations in Global Health, Environmental and Occupational Health and Social Inequities and Health
10. Address the recommendations of the Accreditation Report.
11. Review coherence of undergraduate and graduate curriculum in the context of internal and external resources at SFU.

Activities

- Convene Working Groups of BA and BSc related faculty with representatives from Departments/Faculties offering complementary courses to provide recommendations for improving curriculum opportunities for students, and efficiencies for faculty.

Goal Three:

- *Encourage, support, and produce excellence in teaching and the student experience.*

Strategic Objectives:

1. Encourage and support value of teaching in academic career development for all faculty members consistent with the recommendations in the Task Force on Teaching and Learning.

2. Strengthen and support a comprehensive strategy to encourage student enrollment

Activities

 - Continue to work closely with recruitment professionals in Student Services, become active in career fairs, and engage parents and high-school counselors to increase the profile of health-related education.
 - Implement a faculty and student “peer counseling” program to support undergraduate staff student counseling program.
 - Plan for course delivery across multiple campuses to reduce geographic access barriers for students
 - Work with SFU to reduce administrative barriers to facilitate admission and success for students at all stages of their lives.
 - Support and recognize the special contribution of returning and mature students.
 - Profile the value of the FHS to students at SFU, locally, nationally and internationally
 - Develop a strategy to reach out to targeted students i.e. first nations students
 - Work with SFU to ensure that university admission policies do not unnecessarily restrict the FHS ability to recruit targeted and international students
 - Develop more exchanges opportunities for our students, especially in/from mid- and lower-income countries
 - Develop strategy to provide additional financial support/ stipends to attract students and to encourage/support them to stay

2. Strengthen the continued development of a unique comprehensive, relevant, and interdisciplinary learning environment for undergraduate and graduate students

Activities

 - Create a culture of critical inquiry that adds value to each student’s education
 - Provide a varied core program that facilitates all students to participate in a wide variety of experiences to help develop skills in learning, analysis and communication.
 - Encourage the development of ethical, responsible and informed citizens through exposure to complex contemporary debates.
 - Recognize and support the research interests of students, which may be different than those of faculty

3. Increase transparency of student expectations

Activities

 - Document learning outcomes for each program
 - Provide straightforward information on program requirements

- Provide support to students so that they can plan and complete their programs in a timely way.
4. Develop external partnerships with the health and human service sector that ensure students have meaningful opportunities for learning and research.
- Activities*
- Work with the health sector to develop an appreciation of the value of FHS graduates and to develop a “need” for these graduates
5. Develop strategies that better balance teaching and research responsibilities.
- Activities*
- Review and revise metrics for determining which types of courses are most demanding and implement a system for assigning teaching load that recognizes these differentials.
 - Ensure sustainable teaching support for all courses
 - Encourage undergraduate opportunities for research experience across the programs.

Goal Four:

- *Encourage, support, and produce excellence in research.*

Strategic Objectives:

1. Encourage and support interdisciplinary research
- Activities*
- Provide opportunity for innovative collaboration between researchers early in their careers.
 - Create opportunities to develop a common language, explore different perspectives, develop common hypotheses, and develop shared proposals
 - Profile potential interdisciplinary opportunities
 - Seek seed-funding opportunities to support innovative collaborations and team-building
2. Encourage collaborative development of research Centres and Institutes involving researchers from across all Faculties at SFU and in the BC region.
- Activities*
- Develop SFU Health Advisory Network as opportunity for SFU researchers to develop collaborative initiatives.
 - Invite BC research leaders to explore collaborations with FHS researchers.
3. Provide additional administrative and grant-application support to assist faculty and graduates seeking research funding
- Activities*
- Initiate a review of SFU policy on research employees to ensure stability and sustainability of research groups.

- Develop policy on indirect cost recovery and contract overhead distribution to strengthen support for research groups.
- Encourage development of research collectives, groups, Centres and Institutes with sustainable external funding support.

Goal Five:

- *Provide service to the community – from the FHS community to the global community.*

Strategic Objectives:

1. Develop a faculty-wide strategy for community engagement
Activities
 - Develop a community advisory committee
 - Encourage grassroots engagement by students
 - Ensure FHS faculty members receive formal recognition of and incentives for community-based practice
 - Sponsor forums, conferences and talks on topical issues on health-related research and programming, including representatives from key stakeholders' groups (government, public health organizations, community organizations, aboriginal representatives, addiction and mental health specialists) and publicizing these initiatives.

2. Strengthen the Global Health program
Activities
 - Actively engage faculty and students as part of a worldwide learning community.
 - Identify potential partners in key developing nations and focus collaboration interests on capacity-building through the MPH program.
 - Build partnerships with comparable Faculties, Schools and Departments in universities in key developing nations.
 - Develop structured opportunities for graduate and undergraduate students to undertake supervised learning in key developing nations.
 - Develop collaborative research initiatives with key partners consistent with FHS interests and activities.

3. Demonstrate importance of health-related research and education for current and emerging population and public health issues
Activities
 - Support and facilitate FHS graduates to work as members of interdisciplinary health research teams operating on the local, provincial, national and international stage.