

**St. Francis Xavier University
Faculty of Science**

**Strategic Plan
2016 - 2021**



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Executive Summary

In March 2015, the Faculty of Science, one of four Faculties at St. Francis Xavier University (StFX), passed a motion to embark on its first Faculty-wide strategic planning process with a goal of establishing a clear direction and achievable action for the next five years. A Strategic Planning Committee was struck and tasked with developing the plan. Members of the committee began the planning process by consulting with others within the Faculty of Science. Surveys were sent to faculty, lab instructors, and nurse educators, and a focus group was held with administrative assistants and support staff. Senior administrators were also consulted as were several students. The Faculty of Science Strategic Planning Committee then participated in six workshops organized and facilitated by the StFX Extension Department to analyze the data collected and to draft a strategic plan. The draft strategic plan presented in this document is the result of these efforts and articulates a mission, a vision, a set of values, and a strategic direction for the StFX Faculty of Science for the next five years.

The plan begins with a mission statement for the StFX Faculty of Science:

Through innovative and collaborative teaching and research, the StFX Faculty of Science advances scientific knowledge for the betterment of society by fostering student curiosity and inquiry—preparing the scientific minds of tomorrow.

The 2021 vision statement follows:

The StFX Faculty of Science, known for excellence in teaching and research, is a national leader in student mentorship. The Faculty works collaboratively with all disciplines at StFX and partners with educational institutions, communities, and industries to advance natural and applied scientific knowledge—embracing diversity, interdisciplinarity, and innovation in all that we do.

Five areas of emphasis are also outlined as priorities, in no particular order, for the period of the plan: teaching, research, programming, partnership development, and infrastructure and equipment renewal. Each of these five areas is detailed in terms of the goals, objectives and action plans required for successful implementation.

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Acronyms

The following acronyms are used throughout the StFX Faculty of Science Strategic Plan 2016 – 2021.

APP	Academic Priorities and Planning Committee
AUT	Association of University Teachers
AVP	Academic Vice President and Provost
AVPRGS	Associate Vice President Research and Graduate Studies
CAR	Committee on Academic Review
CEP	Co-operative Education Program
FDC	Faculty Development Committee
FM	Facilities Management
FoS	Faculty of Science
ILO	Industry Liaison Office
ITS	Information Technology Services
MPHEC	Maritime Provinces Higher Education Council
PC	President's Council
PD	Professional Development
RAC	Research Advisory Committee
RSG	Research Services Group
SCS	Student Career Services
SEMC	Strategic Enrollment Management Committee
StFX	St. Francis Xavier University
VP Finance	Vice President Finance and Administration

Introduction

The purpose of this planning process was to produce a document detailing a mission, a vision, values, and a strategic direction for the St. Francis Xavier University (StFX) Faculty of Science.

The StFX Faculty of Science is one of four Faculties at StFX (Arts, Business, and Education). It consists of:

Aquatic Resources	Human Kinetics
Biology	Human Nutrition
Chemistry	Mathematics, Statistics and Computer Science
Earth Sciences	Nursing
Engineering	Physics
Environmental Sciences	

Approximately 142 faculty and staff members in these departments offer more than 16 undergraduate and graduate programs to more than 1660 full-time students and 262 part-time students each year. Faculty and staff work side-by-side with students, building a solid science foundation from which to pursue further research endeavors and scientific and professional careers.

The strategic plan details the path developed by the StFX Faculty of Science Strategic Planning Committee for the next five years, with considerable input from all members of the Faculty as well as members of StFX's senior administration team.

Methodology

Based on a motion passed by the Faculty of Science in March 2015, the Faculty embarked on a strategic planning process. The goal of this process was to provide the Faculty of Science with a clear direction for the next five years.

The members of the Faculty of Science Strategic Planning Committee (a list of members follows) met regularly between April and July to establish the planning process comprised of the following phases.

July 13 - August 5

Faculty of Science and StFX Senior Administrators Consultation Phase

Input was solicited from all members of the Faculty of Science; 49% (77 out of 157 people) of those asked participated in the consultation phase. A link to an online survey was sent to faculty, lab instructors, and nurse educators. The survey was completed by 61 out of 132 people. A focus group held with administrative assistants and support staff was attended by five out of 13 people. Eleven out of 12 senior administrators participated in one-on-one interviews.

Perhaps due to the time of year, only three students (not included in the 157 count) offered their input.

Mid - August – Late October Strategic Plan Development Phase

The Faculty of Science Strategic Planning Committee participated in six workshops to analyze the data collected during the consultation phase, and based on the data analysis, to draft a strategic plan.

November - December Strategic Plan Review Phase

In addition to all members of the Faculty of Science, the draft strategic plan was circulated for review and comment to Faculty of Science Alumni and senior administrators at StFX. The committee considered the feedback provided and finalized the plan.

Faculty of Science Strategic Planning Committee Membership

Dr. Petra Hauf, Dean, Faculty of Science (Committee Co-chair)
Dr. Charmaine McPherson, Past Chair, Faculty of Science (Committee Co-chair)
Dr. Hugo Beltrami, Earth Sciences, Elected Member
Patricia Budicky, Chemistry, Member at Large
Dr. Frank Comeau, Engineering, Elected Member
Dr. Moira Galway, Biology, Elected Member
Dr. Geniece Hallett-Tapley, Chemistry, Incoming Secretary, Faculty of Science
Dr. Jen Jamieson, Human Nutrition, Outgoing Secretary, Faculty of Science
Dr. Daniel Kane, Human Kinetics, Elected Member
Lara MacDonald, Nursing, Member at Large

Values

The Faculty of Science is committed to the following values¹:

1. Excellence in all our activities as members of the Xaverian family
2. Academic engagement that strives for the highest standards of scholarship and learning
3. Student-centered experience within an academic community that promotes equity through fairness, inclusiveness, respect, and mutual support
4. Dedication to social justice expressed through service to the community
5. Interdisciplinary teaching, research, and collaboration that enriches academic learning
6. High-quality interactions between students and all members of the Faculty of Science

The Faculty of Science is dedicated to participating in and supporting all StFX initiatives designed to embrace and foster diversity.

Areas of Emphasis

To make its vision a reality, the StFX Faculty of Science will focus its energy and resources in five areas of emphasis that have been identified as priorities, listed in no particular order, for the period of this plan:

1. Teaching
2. Research
3. Programming
4. Partnership Development
5. Infrastructure and Equipment Renewal

Implementation of the Strategic Plan

Responsibility for the implementation of the StFX Faculty of Science Strategic Plan lies with the Dean of Science, in collaboration with the Chair of the Faculty of Science and in conjunction with StFX's senior administration team, while engaging all members of the Faculty of Science through a deliberative and transparent process.

A key to the successful implementation of the plan is the establishment of measurable indicators² of success based on current and relevant data, which must be completed as groups begin to carry out each action plan.

¹ Values 1 – 4 are adopted from the StFX strategic plan and remain in draft form until they are finalized. Values 5 and 6 are specific to the Faculty of Science.

² Potential success indicators (others will be developed), to be refined and finalized for each action plan, appear in the Appendix.

StFX Faculty of Science Goals, Objectives, and Action Plans

This section of the strategic plan represents the collective input of the StFX Faculty of Science (dean, faculty, lab instructors, nurse educators, administrative assistants, and support staff) and several of StFX's senior administrators related to what needs to be done to realize the 2021 vision for the Faculty of Science. An overview of the goals and objectives for each area of emphasis precedes detailed action plans for each objective.

Goals and Objectives Overview

StFX Faculty of Science Strategic Plan 2016 – 2021 Goals and Objectives Overview	
1. TEACHING	GOAL: ENRICH OUR CULTURE OF TEACHING EXCELLENCE
OBJECTIVES	1.1 Establish a professional development program for all Faculty of Science teaching staff 1.2 Promote workplace equality and equity related to teaching assignments 1.3 Promote our teaching excellence nationally and internationally
2. RESEARCH	GOAL: BECOME CANADA'S LEADER IN ENGAGING UNDERGRADUATE STUDENTS IN INNOVATIVE AND INTERDISCIPLINARY RESEARCH
OBJECTIVES	2.1 Assess our current research culture and identify areas of demonstrated strength and potential areas of improvement 2.2 Establish a professional development program for Faculty of Science researchers 2.3 Promote workplace equality and equity related to research 2.4 Increase undergraduate student engagement in research in the Faculty of Science 2.5 Increase opportunities for internal research collaboration 2.6 Promote our research excellence nationally and internationally

**StFX Faculty of Science Strategic Plan 2016 – 2021
Goals and Objectives Overview**

3. PROGRAMMING	GOAL: OFFER HIGH-QUALITY PROGRAMS THAT ATTRACT TALENTED AND COMMITTED STUDENTS
OBJECTIVES	<p>3.1 Use institutional data to strengthen and enhance existing programs</p> <p>3.2 Establish new and revise existing programs based upon evidence of strategic importance</p> <p>3.3 Increase interdisciplinary programming that involves multiple academic units and engages students across disciplines</p> <p>3.4 Explore, evaluate, develop, and deliver interdisciplinary health-focused programs at StFX</p> <p>3.5 Monitor programs to ensure quality is sustained and improved over time</p>
4. PARTNERSHIP DEVELOPMENT	GOAL: CREATE AND ENHANCE COLLABORATIONS AND PARTNERSHIPS LOCALLY, NATIONALLY, AND INTERNATIONALLY
OBJECTIVES	<p>4.1 Identify current and possible areas of partnership development at all levels</p> <p>4.2 Develop international partnerships with universities</p>
5. INFRASTRUCTURE AND EQUIPMENT RENEWAL	GOAL: ESTABLISH INCLUSIVE AND OPTIMAL TEACHING AND RESEARCH SPACES
OBJECTIVES	<p>5.1 Develop a collective vision for optimal teaching and research spaces for Faculty of Science programs</p> <p>5.2 Develop a plan for the strategic revitalization of infrastructure and equipment to enhance teaching and research</p> <p>5.3 Advocate for and engage in infrastructure renewal</p>

1.0 Teaching³

Members of the Faculty of Science are known for their teaching excellence and their desire to engage in ongoing professional development. They seek fairness in workload assignments and suggest that greater recognition for, and increased communication about, StFX teaching excellence, and in particular the Faculty of Science's teaching excellence, would help build a national institutional profile.

1.1 Teaching		Goal: Enrich our culture of teaching excellence		
Objective 1.1: Establish a professional development program for all Faculty of Science teaching staff				
Activities / Tasks	Collaborators ⁴	Resources ⁵	Timeline ⁶	Outputs
As part of a pilot professional development (PD) program for the Faculty of Science, assess opportunities and learning needs related to building our teaching capacity	Faculty Development Committee (FDC)	Online survey software, and, survey development expertise	August 2016	A survey is constructed and distributed to all Faculty of Science (FoS) members Opportunities to build our teaching capacity and address our learning needs are assessed and documented in a report
Prioritize opportunities and learning needs based on the findings of the assessment		Access to assessment findings	February 2017	Survey findings are summarized and priorities are identified

³ The Faculty of Science acknowledges and values the interdependence of teaching and research. They are separated in the plan purely for pragmatic purposes.

⁴ Collaborators are groups or individuals (listed by name of group or position) with whom members of the Faculty of Science will work to complete each activity. Members of the Faculty of Science are not listed as they will initiate each activity and invite collaborators to work with them.

⁵ Only resources other than time and financial resources are listed as it is assumed that it will take time and financial resources to complete all of the activities.

⁶ The activity should be completed by the date noted.

Liaise with the Faculty Development Committee to ensure resources and effort are used optimally and duplication is avoided	FDC		2016 and 2017, ongoing thereafter	FDC is engaged in an initial discussion regarding how to move forward collaboratively and an ongoing process is agreed upon for sharing information and resources
Plan how the pilot PD program will be designed, developed, delivered, and resourced	FDC, Vice President (VP) Finance	Program planning expertise	2016 and 2017, ongoing thereafter	A pilot PD program is ready for delivery and evaluation
Implement the pilot PD plan	FDC	Program delivery expertise, classroom space	2018 and 2019, ongoing thereafter	A pilot PD program is delivered
Evaluate the PD plan and make recommendations for going forward	FDC	Program evaluation expertise	2018 and 2019, ongoing thereafter	Based on the PD program evaluation, recommendations are formulated

1.2 Teaching

Goal: Enrich our culture of teaching excellence

Objective 1.2: Promote workplace equality and equity related to teaching assignments

Activities / Tasks	Collaborators	Resources	Timeline	Outputs
Assess existing workload models related to teaching and identify what works well and what needs to be improved	Association of University Teachers (AUT), Academic Vice President and Provost (AVP)	Access to information	August 2016	A report is completed that outlines the positive and negative aspects of the existing workload models
Research and evaluate workload models at similar educational institutions, paying particular attention to innovations in this area	AUT, AVP	Access to information	August 2016	A summary or a report on workload models at other Canadian undergraduate institutions is completed
Develop a strategy, including recommendations for structural changes, that increases equality and equity in the workplace and fosters teaching excellence and member satisfaction	AUT, President's Council (PC)	Access to information	February 2017	A strategy is developed to increase workload equality, equity, and member satisfaction within the FoS

1.3 Teaching

Goal: Enrich our culture of teaching excellence

Objective 1.3: Promote our teaching excellence nationally and internationally

Activities / Tasks	Collaborators	Resources	Timeline	Outputs
Create a system, e.g., a database, for capturing all evidence of teaching excellence within the StFX Faculty of Science (e.g., ongoing professional development, student testimonials, peer reviewed publications, teaching awards, recognition for work done in the community related to teaching, etc.)	Advancement, Information Technology Services (ITS), Communications and Marketing	Expertise	February 2017	An information “system” is created and populated
Work with the StFX Communications and Marketing team to develop a communication strategy for disseminating this information	Advancement, Communications and Marketing	Expertise, access to information	August 2017	A communication strategy is developed and implemented
Continue to work with and support Communications and Marketing to ensure new, innovative, and effective ways of getting the message out are considered	Advancement, Communications and Marketing		March 2017 onward	On an ongoing basis Communications and Marketing disseminate information about the teaching excellence of the FoS

2.0 Research⁷

Excellence in research is an integral part of the StFX Faculty of Science. Engagement in research enlivens and animates academic life while helping to prepare the scientific minds of tomorrow. Faculty and staff want to become Canada’s leader in engaging undergraduate students in innovative and interdisciplinary research. In order for this goal to be realized, they require an assessment of the current research culture, provision of a professional development program, increased extramural funding, increased promotion of research, and more opportunities for students to be engaged in research. Faculty and staff workloads also need analysis to ensure that current arrangements are fair and foster opportunities for research.

2.1 Research		Goal: Become Canada’s leader in engaging undergraduate students in innovative and interdisciplinary research		
Objective 2.1: Assess our current research culture and identify areas of demonstrated strength and potential areas of improvement				
Activities / Tasks	Collaborators	Resources	Timeline	Outputs
Meet with the Associate Vice President Research and Graduate Studies to discuss options for assessing the Faculty of Science’s current research culture, including extramural funding (e.g., a research summit)	Associate Vice President Research and Graduate Studies (AVPRGS)		April 2016	A meeting is held with the AVPRGS and a process for assessing the FoS’s research culture is agreed upon

⁷ The Faculty of Science acknowledges and values the interdependence of teaching and research. They are separated in the plan purely for pragmatic purposes.

Design, develop, and host the agreed upon process for assessing the Faculty of Science's current research culture	AVPRGS, VP Finance	Facilitation and design expertise	November 2016	Event (process) is well attended by FoS members
Process the findings, learnings, and recommendations for building the desired research culture in the Faculty of Science			February 2017	A summary of findings, learnings, and recommendations is drafted and is a resource for the FoS
Create and implement an agreed upon plan of action			May 2017	The nature of the existing research culture is articulated and a plan of action exists to improve the research culture in agreed upon areas and in agreed upon ways

2.2 Research		Goal: Become Canada's leader in engaging undergraduate students in innovative and interdisciplinary research		
Objective 2.2: Establish a professional development program for Faculty of Science researchers				
Activities / Tasks	Collaborators	Resources	Timeline	Outputs
As part of a pilot professional development (PD) program for the Faculty of Science, assess opportunities and learning needs related to building our research capacity	FDC, AVPRGS RSG	Online survey software, survey development expertise, focus group design expertise	August 2016	A survey is constructed and distributed to all FoS members and focus group meetings are conducted Opportunities to build our research capacity and address our learning needs are assessed and documented in a report

Prioritize opportunities and learning needs based on the findings of the assessment		Access to assessment findings	February 2017	Survey and focus group findings are summarized and priorities are identified
Plan how the pilot PD program offerings will be designed, developed, delivered, and resourced	Research Services Group (RSG), VP Finance, FDC	Program planning expertise	2016 and 2017, ongoing	A pilot PD program is ready for delivery and evaluation
Implement the pilot PD plan	RSG, VP Finance, FDC	Program delivery expertise, classroom space	2018 and 2019, ongoing	The pilot PD program is delivered
Evaluate the PD plan and make recommendations for going forward	RSG, VP Finance, FDC		2018 and 2019, ongoing	Based on the pilot PD program evaluation, recommendations are formulated

2.3 Research

Goal: Become Canada's leader in engaging undergraduate students in innovative and interdisciplinary research

Objective 2.3: Promote workplace equality and equity related to research

Activities / Tasks	Collaborators	Resources	Timeline	Outputs
Assess the existing workload models related to research and identify what works well and what needs to be improved	AUT, AVP	Access to information	August 2016	A report is completed that outlines the positive and negative aspects of the existing workload models
Research and evaluate workload models at similar educational institutions, paying particular attention to innovations in this area	AVP	Access to information	November 2016	A summary or a report on workload models at other primarily undergraduate Canadian institutions is completed

Develop a strategy, including recommendations for structural changes, that increases equality and equity in the workplace and fosters research excellence and member satisfaction	AUT, PC	Access to information	February 2017	A strategy is developed to increase workload equality, equity, and member satisfaction within the FoS
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2.4 Research		Goal: Become Canada's leader in engaging undergraduate students in innovative and interdisciplinary research		
Objective 2.4: Increase undergraduate student engagement in research in the Faculty of Science				
Activities / Tasks	Collaborators	Resources	Timeline	Outputs
Assess current student research opportunities and our research strengths within the Faculty of Science	RSG	Access to information (database from Objective 2.5)	August 2017	A list of current and future research opportunities exists
Determine whether additional student research opportunities can be created based on this assessment	RSG	Access to information (database from Objective 2.5)	February 2018	More research opportunities are identified
Develop a strategy to ensure equal student access exists to research awards across disciplines and experiences	Research Advisory Committee (RAC), AVPRGS, Students, General Faculty		March 2018 – February 2019	A policy ensuring equal student access to awards is drafted, tabled and passed
Establish awards (health, natural, engineering, and interdisciplinary sciences) for students who were engaged in	VP Finance, RSG		March 2018	Establish awards for various levels (year of study), as well as area of study and student research day awards that

research during their undergraduate careers				promote further research
Create opportunities for the integration of undergraduate and graduate ⁸ research initiatives	Students, Committee on Graduate Studies, RSG	Database (Objective 2.5) and database of graduate students and incoming honours students	December 2018	Publication / presentation of more interdisciplinary research projects featuring the integration of undergraduate and graduate research initiatives

2.5 Research		Goal: Become Canada's leader in engaging undergraduate students in innovative and interdisciplinary research		
Objective 2.5: Increase opportunities for internal research collaboration				
Activities / Tasks	Collaborators	Resources	Timeline	Outputs
Inventory and create a database of existing research expertise, infrastructure / equipment, and research initiatives	RSG, ITS	Expertise	August 2017	A database is established (space, equipment, and faculty research interests)
Identify opportunities to share resources: people, space, and equipment	RSG		February 2018	Opportunities to share resources are identified
Identify opportunities for engaging in collaborative research	RSG		August 2018	Opportunities to collaborate are identified
Engage in collaborative research	RSG		September 2018	Collaborative research initiatives increase

⁸ A graduate research program's ability to enhance interdisciplinary undergraduate research brings tremendous value to the Faculty of Science.

2.6 Research

Goal: Become Canada's leader in engaging undergraduate students in innovative and interdisciplinary research

Objective 2.6: Promote our research excellence nationally and internationally

Activities / Tasks	Collaborators	Resources	Timeline	Outputs
Create a system, e.g., a database, for capturing all evidence of research excellence within the StFX Faculty of Science (e.g., ongoing professional development, student testimonials, peer reviewed publications, research awards, recognition for work done in the community related to research, etc.)	Advancement, ITS, Communications and Marketing	Expertise	February 2017	An information "system" is created and populated
Work with the StFX Communications and Marketing team to develop a communication strategy for disseminating this information	Advancement, Communications and Marketing	Expertise, access to information	August 2017	A communication strategy is developed and implemented
Continue to work with and support Communications and Marketing to ensure new, innovative, and effective ways of getting the message out are considered	Advancement, Communications and Marketing		March 2017 onward	On an ongoing basis Communications and Marketing disseminate information communicating the research excellence of the FoS

3.0 Programming⁹

The StFX Faculty of Science aims to offer high-quality undergraduate and graduate programs that attract talented and committed students from diverse backgrounds. Current programs need to be monitored to ensure that quality and relevance are maintained. In addition, new interdisciplinary programming that involves several academic units and engages students across disciplines needs to be explored and pursued.

3.1 Programming		Goal: Offer high-quality programs that attract talented and committed students		
Objective 3.1: Use institutional data to strengthen and enhance existing undergraduate and graduate programs				
Activities / Tasks	Collaborators	Resources	Timeline	Outputs
Access data related to Faculty of Science student attraction and retention (enrollment patterns, dropout rates and places, exit interviews, etc.)	Strategic Enrollment Management Committee (SEMC)	Access to information	August 2017	Valid and complete data upon which to identify trends specific to the FoS is available
Review data and identify programming opportunities with respect to the attraction and retention of Faculty of Science students	SEMC, AVPRGS	Access to information	August 2017 – August 2018	Evidence-based programming decisions are made
Promote potential career paths and career development opportunities based on data related to the attraction and retention of Faculty of Science students	Advancement, Student Advising, Student Career Services, High School Counselors	Access to information and expertise	Immediately, ongoing	Student awareness of careers that can result from completing FoS programs increases and more FoS students are attracted and retained

⁹ Any changes in current programs or in the development of new programs will consider the Task Force Report and will use existing academic planning and approval structures and processes (e.g., discussion with the Senate Academic Priorities and Planning Committee (APP) during early stages of development; implementation processes may include presentation to the APP, the Committee on Studies, and the Senate; submissions to the Maritime Provinces Higher Education Council (MPHEC) may also be required).

3.2 Programming

Goal: Offer high-quality programs that attract talented and committed students

Objective 3.2: Establish new and revise existing programs based upon evidence of strategic importance

Activities / Tasks	Collaborators	Resources	Timeline	Outputs
Research and document relevant existing programs in Canada	AVP, AVPRGS	Access to information and expertise	2016-2018	A researched and documented synopsis of relevant programs in Canada is complete
Prioritize ideas for new / revised programs based on available expertise (on-campus)	AVP, AVPRGS	Access to information and expertise	Immediate and ongoing	Program ideas are prioritized
Develop a concept document describing in detail all opportunities and considerations related to the development of new program(s)	AVP, AVPRGS	Access to information and expertise	2016-2018	A concept document detailing all opportunities and considerations related to the development of a new program(s) is complete
In conjunction with all Faculty of Science members, develop recommendations for further action	AVP, AVPRGS	Access to information and expertise	2016-2018	Recommendations for further action are developed
Identify a program development opportunity(ies) for the StFX Faculty of Science	AVP, AVPRGS	Access to information and expertise	2016-2018	A program development opportunity(ies) for the StFX FoS is identified
Determine the new program(s) objectives	AVP, AVPRGS	Access to information and expertise	2016-2018	New program objectives are determined
Assess the suitability of current course offerings for inclusion in a new program(s)	AVP, AVPRGS	Access to information and expertise	2016-2018	The suitability of current course offerings for inclusion in a new program(s) is assessed
Design, develop, deliver, and evaluate the new program(s) in strategic area(s)	AVP, AVPRGS	Access to information and expertise	2019-2020	New program(s) are designed, developed, delivered, and evaluated

3.3 Programming

Goal: Offer high-quality programs that attract talented and committed students

Objective 3.3: Increase interdisciplinary programming that involves multiple academic units and engages students across disciplines

Activities / Tasks	Collaborators	Resources	Timeline	Outputs
Compile a list of interdisciplinary course / program offerings	AVP, AVPRGS, Deans	Access to information	Immediate and ongoing	A comprehensive list exists of interdisciplinary courses/programs
Examine current examples of interdisciplinary courses / programs and institutional data and capture the learnings	AVP, AVPRGS, Deans	Access to information and expertise	August 2016	The strengths and weaknesses of existing interdisciplinary courses / programs are considered as are opportunities for further development and considerations based on what has been learned
Organize regular meetings between and among departments	AVP, AVPRGS, Deans		Immediate and ongoing	Meetings are held to advance interdisciplinary programming
Identify logistical and structural challenges to interdisciplinary courses and programming	AVP, AVPRGS, Deans	Access to information	August 2016	Challenges are identified and options for overcoming them are considered
Plan and deliver pilot interdisciplinary courses / programs	AVP, AVPRGS, Deans	Access to information and expertise	February – November 2017	Pilot courses / programs are delivered
Evaluate pilot courses / programs (enrollment, student feedback)	AVP, AVPRGS, Deans	Access to information and expertise	June – July 2017	Evaluation of pilot courses / programs is complete
Develop and prepare to implement interdisciplinary courses / programs	AVP, AVPRGS, Deans	Access to information and expertise	2017 - 2020	Interdisciplinary program(s) are designed, developed, approved, and ready for delivery

3.4 Programming

Goal: Offer high-quality programs that attract talented and committed students

Objective 3.4: Explore, evaluate, develop, and deliver health-focused interdisciplinary programs at StFX

Activities / Tasks	Collaborators	Resources	Timeline	Outputs
Identify an interdisciplinary health program development opportunity(ies) for StFX	AVP and Deans	Health Studies Colloquium Initiative, Major in Health Sciences Initiative, and Pre-Med Society Initiative	March 2016	An interdisciplinary health program development opportunity(ies) is identified for StFX
Research and document relevant interdisciplinary health programs in Canada	AVP and Deans	Access to information	May 2016	Relevant Canadian interdisciplinary health programs are researched and documented
Determine the new interdisciplinary health program objectives	AVP and Deans	Access to information and expertise	May 2016	New interdisciplinary health program objectives are developed
Develop a concept document describing in detail all opportunities and considerations related to the development of a new interdisciplinary health program(s)	AVP and Deans	Access to information and expertise	July 2016	A concept document describing all opportunities and considerations related to the development of a new interdisciplinary health program(s) is developed
Assess the suitability of current health-related course offerings for inclusion in a new interdisciplinary health program(s)	AVP and Deans	Access to information and expertise	July 2016	The suitability of current health-related course offerings for inclusion in a new interdisciplinary health program(s) is assessed
Design and develop a new interdisciplinary health program(s)	AVP and Deans	Access to information and expertise	December 2016	A new interdisciplinary health program(s) is designed and developed

Deliver a new interdisciplinary health program(s)	AVP and Deans	Access to information and expertise	December 2016	A new interdisciplinary health program(s) is designed, developed, delivered, and evaluated
Evaluate the new interdisciplinary health program(s)			December 2017 and ongoing	The new interdisciplinary health program(s) is delivered and evaluated and the learnings from this experience are used to make program improvements

3.5 Programming		Goal: Offer high-quality programs that attract talented and committed students		
Objective 3.5: Monitor programs to ensure quality is sustained and improved over time				
Activities / Tasks	Collaborators	Resources	Timeline	Outputs
Share tools for assessing programs among members of the Faculty of Science		Access to information and expertise	Beginning immediately and ongoing	Members of the FoS have a host of assessment tools, as well as the expertise of their colleagues, from which to draw
Ensure program assessment processes become part of the culture of the Faculty of Science		Access to information and expertise	Immediate and ongoing	Regular reports are shared, accreditations are maintained, and continuous quality improvement processes are in place and embraced
Address feedback from external reviews (e.g., accreditation reviews, Committee on Academic Review (CAR) reviews) at the program level	CAR, AVP, Senate	Access to information	Immediate and ongoing and / or timeline of external accreditation bodies	Feedback from external reviews is addressed and programs are continuously improved

4.0 Partnership Development

Partnerships are crucial for the on-going vibrancy of academic programming, institutional viability, and scientific inquiry. The StFX Faculty of Science seeks to strategically develop and enhance local, national, and international partnerships. Partnerships that will connect faculty and staff internationally with other universities are particularly important.

4.1 Partnership Development		Goal: Create and enhance collaborations and partnerships locally, nationally, and internationally		
Objective 4.1: Identify current and possible areas of partnership development at all levels				
Activities / Tasks	Collaborators	Resources	Timeline	Outputs
List all current partnerships and assess the nature of the partnership agreements considering what the Faculty of Science brings to the partnerships and what the Faculty of Science receives from the partnerships		Survey to collect data and access to information	August 2017	All partnership agreements are noted as well as the nature of the agreement (purpose, role, responsibilities, resources contributed or gained, etc.); data included in database from Objective 2.5
Identify partners ¹⁰ and / or areas that would benefit from further partnership development, e.g., recruitment, teaching, research, experiential learning opportunities such as co-op placements and	AVPRGS, Industry Liaison Office (ILO), Coady, Service Learning, Co-operative Education Program	Access to information, expertise	August 2017	Areas for partnership growth and development are identified

¹⁰ Potential partnerships at StFX might include Coady, the Co-operative Education Program, StFX Alumni, etc. Partnerships with other educational institutions may include the Nova Scotia Community College and other Canadian universities. New partnerships may be developed or existing partnerships enhanced with businesses and community organizations in North Eastern Nova Scotia and elsewhere, and new research partnerships may be developed with Industry and existing research partnerships enriched.

internships, advancing science, acquiring funding, infrastructure and equipment renewal, etc., and list what the Faculty of Science could bring to these potential partnerships	(CEP)			
Prioritize partnership development goals and draft a plan to move forward	AVP	Access to information, expertise	February 2018	A strategic partnership development plan is presented to the AVP and implemented incrementally
Assess partnership development success and incorporate learnings in next steps		Access to information, expertise	February 2019	Next steps are formulated based on learnings; improved partnerships result

4.2 Partnership Development		Goal: Create and enhance collaborations and partnerships locally, nationally, and internationally		
Objective 4.2: Develop international partnerships with universities				
Activities / Tasks	Responsibility	Resources	Timeline	Outputs
Assess current and potential international partnerships with universities	RSG, Director of Internationalization		August 2017	Based on assessment, a list of potential partnerships is created
Prioritize potential partnership development opportunities for both teaching and research and create and implement a plan to grow the partnerships	RSG, Director of Internationalization		March 2018	Based on identified priorities, relationships are built and collaborative partnerships with universities internationally are developing

5.0 Infrastructure and Equipment Renewal

The infrastructure and equipment available at StFX play a crucial role in fostering creativity and scientific endeavors. A vision for sustainable, optimal learning spaces is required at the university that can integrate infrastructure and equipment renewal into teaching and research. The StFX Faculty of Science wants to engage in and advocate for short- and long-term infrastructure and equipment investments that enrich and enliven teaching, research, and learning.

5.1 Infrastructure and Equipment Renewal		Goal: Establish inclusive and optimal teaching and research spaces		
Objective 5.1: Develop a collective vision for optimal teaching and research spaces for Faculty of Science programs				
Activities / Tasks	Collaborators	Resources	Timeline	Outputs
Access the findings of campus-wide work that has begun in this area (e.g., Faculty Fall Retreat on Teaching and Learning Spaces, August 2015)	FDC, Facilities Management (FM)	Classroom survey and Retreat findings	November 2016	The FoS has access to the findings of work done in this area by others on campus
Gather input from all members of the Faculty of Science related to their vision for optimal classroom and laboratory spaces	Committees and individuals mandated to support diverse StFX community members	Survey software and expertise	February 2017	FoS input is gathered
Draft a collective vision for optimal learning spaces and verify it with members of Faculty of Science			May 2017	A vision for optimal teaching and research spaces is articulated, affirmed, and agreed upon by the FoS

5.2 Infrastructure and Equipment Renewal		Goal: Establish inclusive and optimal teaching and research spaces		
Objective 5.2: Develop a plan for the strategic revitalization of infrastructure and equipment to enhance teaching and research				
Activities / Tasks	Collaborators	Resources	Timeline	Outputs
Request that all Faculty of Science members document and prioritize infrastructure and equipment needs, including online infrastructure		Survey software and expertise Inventory of existing equipment	August 2016	Infrastructure and equipment needs are documented and prioritized
Request that all Faculty of Science members provide lifespan estimates for non-space capital (in relation to replacement planning)	FM, Procurement	Existing records and institutional knowledge	August 2016	A report on lifespan estimates is produced and appended to infrastructure and equipment inventory
Evaluate service agreements, maintenance contracts, and warranties for all applicable equipment to determine eligibility for replacements	FM, Procurement	Existing records and institutional knowledge	August 2016	A plan is documented to maximize the benefits of existing agreements and to identify areas where investments will be required
Develop a plan for the strategic revitalization of equipment that documents (1) what exists, (2) what is required to maintain excellence in teaching and research, and (3) the required short- and long-term infrastructure investments based on the data collected		Relevant data collected	March 2017	A strategic equipment renewal plan is complete and ready to be implemented

5.3 Infrastructure and Equipment Renewal

Goal: Establish inclusive and optimal teaching and research spaces

Objective 5.3: Advocate for and engage in infrastructure renewal

Activities / Tasks	Collaborators	Resources	Timeline	Outputs
Meet with, learn about, and support the work of Advancement and Procurement related to the acquisition of infrastructure and equipment in support of Faculty of Science teaching and research excellence	Advancement and Procurement		April 2017	A meeting is held, information is exchanged and an ongoing dialogue begins
Engage faculty, staff, senior administration, Advancement, and students in an exploration of non-traditional ways of funding infrastructure and equipment renewal	PC, Advancement and students	Access to information	August 2017	A list of non-traditional ways of funding is generated and assessed, and potential next steps are agreed upon
Encourage the faculty and staff pursuit of infrastructure and equipment grants and gifts			Beginning immediately and ongoing	Increased faculty and staff infrastructure and equipment grants and gifts are awarded

Timeline of Strategic Activities

Objectives and action plans outline the work that must be done in each area of emphasis, each with a timeline. It is helpful to create a holistic timeline of strategic activities.

Recommendations

As the facilitator of the StFX Faculty of Science's strategic planning process, the StFX Extension Department puts forth the following recommendations:

1. Calculate the costs of implementing the strategic plan in terms of time, human resources, and money. It may be necessary to reconcile the timeline of strategic activities with the availability of resources to ensure the plan is successfully implemented.
2. Conduct a careful examination of the *Faculty of Science Strategic Plan 2016-2021* and the StFX strategic plan (in progress) to ensure complementarity exists as well as to realize resource efficiencies wherever possible during implementation.
3. Develop a communication strategy related to the implementation of the strategic plan to ensure accomplishments, challenges, and unexpected happenings are communicated effectively and efficiently to members of the Faculty of Science and other stakeholders.
4. The successful implementation of the plan will be enhanced by instituting a regular review process, e.g., include "implementation of the strategic plan" as a standing agenda item, at which time progress related to the achievement of the outputs stated in the strategic plan should be shared.
5. A great deal of value can also be derived from participating in an annual review process during which data related to the goals and objectives of the plan, gathered through StFX processes, is reviewed, progress is assessed, annual priorities are discussed, and, if necessary, action plans are revised. This would also be an opportune time to consider contextual changes and their implications.

Appendix

POTENTIAL SUCCESS INDICATORS¹¹ (A SAMPLE) – MEASURES TO BE COMPLETED¹²

TEACHING:

- An increase in the number of institutional, regional, and national teaching awards (e.g., 3M) received per year among the members of the FoS than in previous year(s)
- Course evaluations are better than previous year(s), or above national norms without corresponding grade inflation (e.g., class grade median below an agreed upon value, or apply more advanced statistics to identify skewed values, etc.)

RESEARCH:

- More faculty members mentor more honours students (or equivalent) compared to previous year(s), and / or the mentoring of research students produces more and / or higher quality outcomes (e.g., increased students included in grant applications, increased research publications, etc.)
- An increased number of faculty successfully seek extramural funding than in previous year(s)
- An increased number of interdepartmental, interfaculty, etc., research collaborations are reported than in previous year(s)

PROGRAMMING:

- Faculty of Science enrollment and student retention rates improve (quantifiable measures to be established in concert with StFX goals)
- Student retention is better than in previous year(s)
- StFX FoS collaborate to integrate new and existing curriculum to respond to the undergraduate students learning needs

PARTNERSHIP DEVELOPMENT:

- An increased number of student participation in co-op placements, internships, service learning programming, etc., versus previous year(s)
- An increased number of formal agreements are in place to establish new university-external partnerships (research, industrial, international, etc.)

INFRASTRUCTURE AND EQUIPMENT RENEWAL:

- A strategic infrastructure revitalization plan informs FoS and university decision-making, i.e., recommendations are followed, sustainable infrastructure renewal that begins 2016-2021
- Infrastructure renewal (accessibility, technology, etc.) supports the success and development of the FoS members

¹¹ Measures are to be completed by groups responsible for carrying out action plans.

¹² Data required for measurables will primarily be sourced from StFX's data gathering processes. However, it may be necessary to gather baseline data prior to the implementation of the StFX Faculty of Science 2016-2021 Strategic Plan.