



FACULTY OF
AGRICULTURE
**STRATEGIC
ACADEMIC
PLAN**
2021–2026



DALHOUSIE
UNIVERSITY

FACULTY OF AGRICULTURE



PREFACE

This Faculty Strategic Academic Plan (2021–2026) was developed and compiled by the Office of the Associate Dean (Academic), with submissions from the four Department Chairs of the Faculty of Agriculture, Dalhousie University. The Faculty Strategic Academic Plan (FSAP) aligns with and complements the recently approved Dalhousie University Faculty of Agriculture (2020–2025) Strategic Plan.

1 BACKGROUND AND CONTEXT

The Faculty of Agriculture (FoA) applied the United Nations Sustainable Development Goals (UN SDGs) as a basis to develop the 2020-2025 Strategic Plan. Details of priorities and actions to be anchored to the FoA Strategic Plan (2020–2025) are outlined in (secondary) plans dealing with the FoA work on Academic, Research, SEM and International activities.



2 FACULTY VISION, MISSION, AND VALUES

The following vision and mission are taken directly from the recently approved Dalhousie University Faculty of Agriculture (2020–2025) Strategic Plan.

VISION *To be an international leader for education, training, research and advice to agricultural learners, partners and communities in the Atlantic Provinces and around the world (page 4).*

MISSION *Specializing in post-secondary education in agriculture and its related disciplines, our scholarship, research and training generate knowledge and solutions for healthy, sustainable societies. Our outreach and international activities train leaders for local and global community engagement (page 4).*

Details of our Values and Goals are described in the Dalhousie University Faculty of Agriculture (2020–2025) Strategic Plan and are not repeated here.

3

THEMATIC PLANS

The Faculty of Agriculture Academic Plan is based on priorities from and for all four academic Departments. The aspirational goals of this 2021–2026 FASP are built around the following four specific themes.

- i)** Faculty-wide (multi-department) plan;
- ii)** Top three academic program priorities, according to department;
- iii)** New resources (i.e., new professoriate and/or instructor positions; program resources, or infrastructure) each of the four academic departments will need in order to accomplish their priorities.
- iv)** Plan for minimizing or eliminating low enrollment courses.



3.2 TOP THREE ACADEMIC PROGRAM PRIORITIES FOR THE NEXT 5 YEARS, ACCORDING TO DEPARTMENT

3.2.1 Department of Animal Science and Aquaculture

1. Faculty, Senate and MPHEC approval of the Diploma in Agriculture, including the Dairy program/Student Managed Farm and implementation of this program.
2. Revision of BSc(Agr) Animal Science program and BSc(Agr) Aquaculture programs to meet Professional Agrology standards and to ensure learning objectives are consistent with UN Sustainable Development Goals. Revision will focus on sustainability of animal systems, resilience to climate change, animal welfare, and industry and consumer changes. This revision requires review of the Bioveterinary Science program as many courses are common. As this revision occurs, courses will be identified as priorities for on-line delivery and courses that can be cross-listed with graduate level courses identified.
3. Review the Veterinary Technology program in parallel with the Bioveterinary Science program to identify potential areas of integration and shared resources, including opportunities for Honours students and graduate work, to capitalize on the strong student interest and enrollment in companion animals, animal health and veterinary medicine.

3.2.2 Department of Business and Social Sciences

1. Increase student enrolment in all degree programs and diversity of students enrolled in BSc(Agr)-Agribusiness and BSc(Agr)-AgEcon.
2. Explore making BSc(Agr)-Agribusiness and BSc(Agr)-AgEcon programs more agricultural- and agrifood-oriented, to establish a niche and align with Professional Agrologist requirements.
3. Add a social sciences/humanities minor related to agriculture, rural economy/studies, and conservation using existing courses.



3.2.3 Department of Engineering

The Department of Engineering will focus on Digital Agriculture, Clean Technology and Integrated Engineering in conjunction with a shared goal of greater curriculum integration of the UN Sustainable Development Goals and Professional Agrologist (P.Ag.) requirements. During the next five years, the Department of Engineering will work on the following priorities:

1. Curriculum revision of the BSc(Agr)IEM major to update and include the above priorities, and include Digital Agriculture or Clean Technology streams.
2. Continue work with the Faculty of Engineering, and International Office to develop a strengthened and diversified 4yr Bachelor of Engineering in Integrated Engineering, which addresses the needs of the agricultural industry with a program incorporating Mechanized Systems and Environment Sustainability Streams.
 - Further explore the opportunity for creation of a bridging engineering agreement with India in conjunction with existing articulations
3. Explore the opportunity for:
 - a. A certificate in Digital Agriculture
 - b. A minor in Digital Agriculture

3.2.4 Department of Plant, Food, and Environmental Sciences

The Department of Plant, Food, and Environmental Sciences has diverse disciplines identified as Plant and Horticulture, Food, Landscape Architecture, Environmental Sciences and Agro-ecology. Each of these academic areas includes a shared goal to achieve sustainable land, landscapes, and managed terrestrial ecosystems. To create cohesive and diverse academic activities, PFES will revise programs in the following three areas.

1. *Diploma programs:*

- PFES will revise the Diploma in Agriculture program in order to assist the Faculty of Agriculture achieve its curriculum development goals.
- To increase efficiencies, the Department will explore modifying the Diploma in Managed Landscapes program by integrating/merging it with the undergraduate degree in Landscape Architecture program. Students who complete the first two years may earn a certificate.

2. *Degree programs:*

PFES plans to explore initiatives to streamline and strengthen program offerings across its disciplines and areas of responsibility.

- Complete the on-going program modification, approval and accreditation process for the undergraduate degree in Landscape Architecture.
- Complete the program reviews of the BSc(Agr) Plant Science and Environmental Science majors and honors programs, while exploring the possibilities of a new major in Food Innovation, either as an independent major or blended with the BSc(Agr) majors in Plant Science and Environmental Science.
- Explore the possibility of converting up to 20% of the online teaching resources used in the 2020/2021 academic year to (more long-term) online or a blended delivery format.
- In order to strengthen hands-on learning, the Department will consider the development of outdoor classrooms using our rich outdoor facilities (Demo Garden, Orchard, Chef's Garden, Rock Garden, Limestone Garden, etc.). Such classrooms could be used to offer a large range of labs for a diverse number of courses on campus, creating a differentiating factor for attracting new students and supporting student retention.

3. *Minors and Certificates:*

The Department will explore the strategic development and management of its minors and certificates, to understand the balance between available resources and unique options for students. The plan includes:

- Develop and obtain approval of a Sustainable Soil Management Certificate; and
- Certificate in Urban Forestry Management.

To balance these initiatives, a management system is being explored that will assess the enrolment of current minors and certificates and the potential of new minors and certificates that are aligned with current resources and have potential for high enrolment figures.

3.3 NEW RESOURCES (I.E., NEW PROFESSORIAL AND/OR INSTRUCTOR POSITIONS; PROGRAM RESOURCES, OR INFRASTRUCTURE) NEEDED TO ACCOMPLISH THE PRIORITIES NOTED ABOVE

3.3.1 Department of Animal Science and Aquaculture

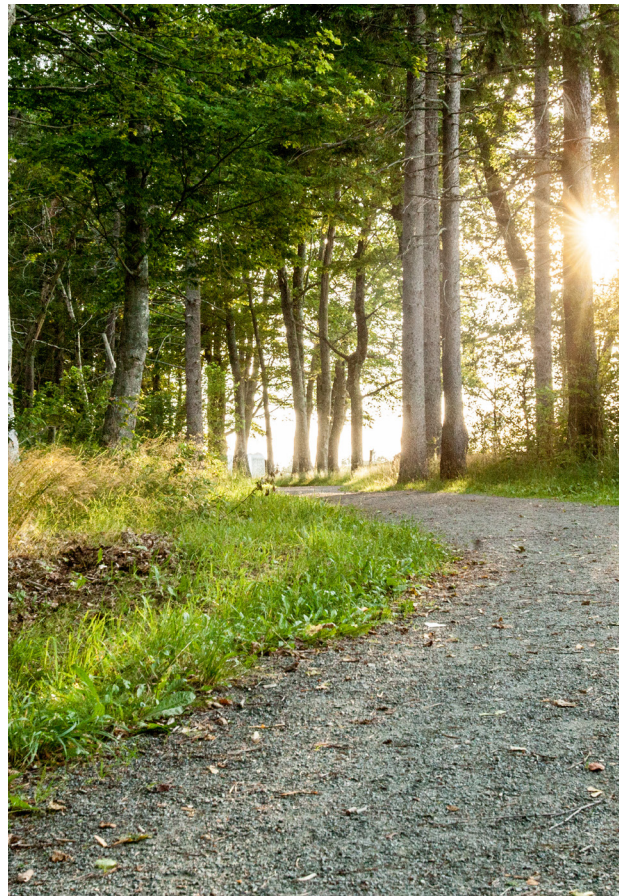
1. Professorial position in Sustainable Animal Production. Depending on focus, an option to have the position cross-appointed with Dept. of Business and Social Sciences will be explored. No major investment in infrastructure is anticipated.
2. Professorial position: Ph.D in Veterinary physiology/ Animal Health. An expanded veterinary clinical facility (renewal of Boulden Building to allow for clinical laboratories, potential companion animal holding units) would increase ability for this individual to carry out research and teaching.
3. Professorial position in Aquaculture with focus on aquaculture production systems/techniques to meet changing industry requirements. On-going discussions on refinement/enhancement of the Aquaculture Facility will identify needed infrastructure changes.

3.3.2 Department of Business and Social Sciences

1. Work with marketing consultants/specialists devoted to BSS who can promote BSS programs using a focused, sustained strategy
2. Engage recruiters with a priority focus for programs on the FoA campus
3. Interdisciplinary professorial who can work across economics, business, social sciences, and humanities in key areas related to FoA goals (UNSDGs, food security, etc.)

3.3.3 Department of Engineering

1. Professorial position in Physics Engineering focusing on the application of science in advancement of technology towards sustainability.
2. Development of Strategic Communications Plan for existing and potential programs in consultation with Communication Professionals.
3. Professorial position in Clean Technology focusing on Resilient Agricultural Practices.
4. Improvement of lab ventilation and needed upgrades for teaching purposes and research support.
5. Professorial position in Digital Agriculture complimenting the existing Mechanized Systems professor in the development of the Digital Agriculture Centre of Excellence.



3.3.4 Department of Plant, Food, and Environmental Sciences

The following four positions have been committed to the department by the Faculty of Agriculture. The hiring process will be initiated as soon as permission is granted to move forward.

1. Food BioScience faculty position;
2. Assistant Professor in Biodiversity - Food Security linkages;
3. Assistant Professor in Agricultural Residue Chemistry;
4. Assistant Professor in Agronomy.

Besides the above commitments, PFES is exploring the replacement of the 11 additional faculty positions that have been lost during the past three years, primarily due to retirements. The following positions are urgently required for the department to achieve teaching and research priorities:

1. Professoriate position in landscape/urban horticulture;
2. Professoriate/instructor position in plant biology/botany.
3. Instructor positions in horticulture, environmental sciences, and chemistry.
4. Professoriate position in molecular breeding and functional genomics for research in climate change, biodiversity, and eco-systems.

The Department is also considering the hiring of additional faculty positions to teach essential courses in the revised diploma and degree programs, as well as to provide enhanced research capabilities. In order to do so, PEFS requires key program resources, such as external experts/advisors, facilitators, as well as funding to revise programs. PFES also hopes that infrastructure for teaching will be renewed, including the use of the East Wing of Cox building, greenhouse repair, renewal and potential rebuild, botanical garden improvement (the installation of additional maps and tour signs, development of a welcome centre, and labelling of the plant collections across campus), as well as the full recovery of the equipment lost in the 2018 Cox fire.

3.4 PLAN FOR MINIMIZING OR ELIMINATING LOW ENROLLMENT COURSES AND PROGRAMS

3.4.1 Department of Animal Science and Aquaculture

The Department is reviewing courses which consistently have fewer than 10 students to consider overall need for the course in view of revised learning objectives and whether the course can be discontinued. If continued to be offered, will be considered for every other year offerings.

The planned Diploma in Agriculture program will allow for enrollment of both degree and diploma students in introductory animal production courses; replacement of upper level animal science courses will be cross-listed with graduate courses whenever possible.

Prerequisite courses will be reviewed to maximize options for students from other programs to take courses as electives. Blended learning/on-line delivery options will be considered to maximize enrollment. (Note that most courses offered through the Department are above the 10 student number).

3.4.2 Department of Business and Social Sciences

Within the four degree programs in the BSS Dept., almost all courses are required courses, therefore there is little to be done in these areas. For courses not included in the required programs, mainly the Social Science and Humanities (SS/H) courses, a two-pronged strategy is being developed of eliminating low enrolment courses and developing a small number of SS/H courses more relevant to students pursuing the degrees offered by FoA. As an example, POLS1000 & 1001 have been deleted and replaced by POLS2000, thereby eliminating two very low enrolment courses and replacing them with a high(er) enrolment course. The introduction of an SS/H minor could also promote enrolment in these SS/H courses.

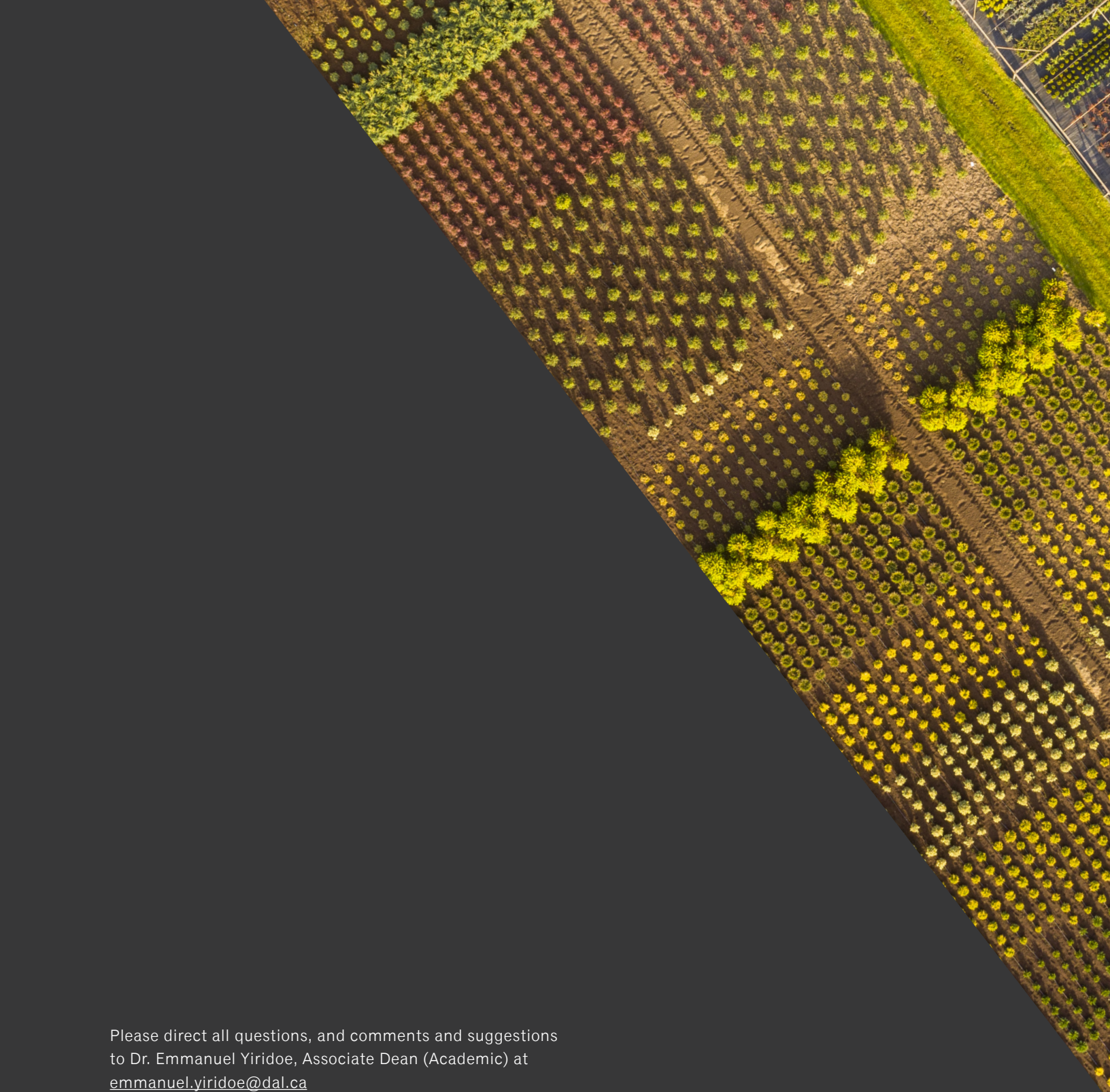
3.3.3 Department of Engineering

The Department of Engineering recognizes that enrolment numbers are an area of concern that requires focus on a departmental, faculty and institutional scale. Recruitment and marketing planning consultation is necessary before large scale course offering reductions can be considered. The Department of Engineering will:

1. Minimize overlap by combining offerings of: i) MTHA 1000; ii) PHYS 1000; and iii) STAA 2000
2. Offer internal communication with advisors of possible elective courses with broad appeal (e.g., APSC 3019, APSC 2011, CSCA 1000, CSCA 2000, etc)
3. Seek dual program enrolments where possible.
4. Develop and promote Digital Agriculture Certificate and Minor possibly using online or blended learning opportunities.

3.4.4 Department of Plant, Food, and Environmental Sciences

1. PFES is leading the on-going revision for accreditation of the undergraduate degree in Landscape Architecture. It is anticipated that this new program will be combined with the Diploma in Managed Landscapes. Courses would be designed to meet program accreditation requirements, and potential exists to design a certificate within the program for students who complete the first two years in the program.
2. Modification of the BSc(Agr) Plant/Food/ Environmental Science majors with the three focal pillars of Plant, Food, and Environmental Sciences. The department will also explore a name change, such as Agro-ecology, since the term “Environmental Science” is often mixed or confused with a similar program delivered at the Halifax campus. The modifications would result in removal of a significant number of the existing courses.



Please direct all questions, and comments and suggestions to Dr. Emmanuel Yiridoe, Associate Dean (Academic) at emmanuel.yiridoe@dal.ca

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