Faculty of Engineering

Strategic Plan

October 28, 2015

Mission:

To achieve excellence in engineering education and research, and to collaborate with industry and with the broader community in a way that contributes to the development of Nova Scotia, the Atlantic Region, and Canada.

Vision:

Dalhousie Engineering's vision is a Faculty of Engineering that

1. provides outstanding education in engineering and applied science;
2. performs excellent engineering research that benefits the Atlantic region and Canada;
3. provides leadership for the engineering profession and acts as a key resource for government and industry in Nova Scotia, the Atlantic Region and Canada;
4. provides an environment that makes students, faculty and staff thrive.

Reporting:

The Dean of Engineering, with the Department Heads, will regularly report to the Faculty of Engineering on the progress made towards achieving our strategic goals.

The following table summarizes how Engineering's Strategic Plan aligns with Dalhousie's Strategic Direction (2014-2018):

Engineering's Strategic Plan	**Alignment with Dalhousie's Strategic Direction (2014-2018)** http://issuu.com/dalhousieuniversity/docs/16250_stratdirreport_final-issu?e=2143093/9190510
	Enhance the transformative power of teaching and learning
1.1 a), 1.2 f)	Increase retention and degree completion
1.2 d), 2.2 c)	Focus on strategic student recruitment based on discipline, level and diversity
1.2 a) b) e) f) g) h) i) j), 3.1a)	Strengthen student experience, leadership development and additional support for our locally diverse and international students
1.1 a) b) d)	Foster and support innovation in program development and excellence in teaching and pedagogy
	Expand the opportunities for research, scholarly and artistic work
2.1 a) b)	Direct and attract resources to priority research areas, with local, and national and international importance
4.3 a) b)	Attract and retain outstanding professors
1.2 f) h), 2.2 c)	Attract and support excellent graduate students and postdoctoral fellows to strengthen the impact of research
1.2 b), 4.1 a)	Enhance research with state-of-the-art facilities and resources in accordance with the Institutional Framework for the Support of Research
	Catalyze the intellectual, social and economic development of our communities
1.2 d) e) i), 3.1 a) b), 3.2 a) b)	Contribute to cultural and economic vitality, locally and globally, by fostering creativity, innovation and entrepreneurship
3.1 a) b), 3.2 a) b), 4.2 a), 4.3h)	Maximize the opportunities for students, faculty and staff to contribute to community both inside and outside of the university
3.2 a) b), 4.3c) d)	Promote a culture of service and engagement among students, faculty and staff
	Take our place nationally and internationally
2.1 a) b), 3.1 a) b), 3.2 b)	Foster and support key external partnerships and relationships with alumni, other universities, governments, businesses and non-governmental organizations
2.1 a) b), 3.2 a) b), 4.2 a), 4.3h)	Strengthen the recognition for our academic excellence and reputation at national and international levels
	Build our institutional capacities
4.3 a) b) c) d)	Develop a human resource strategy that allows us to attract, support and reward the best faculty and staff
1.2 f) i)	Foster a collegial culture grounded in diversity and inclusiveness
1.2 a)	Enhance our infrastructure with a multi-year capital plan that promotes environmentally sustainable development
1.2 b) c), 4.1 a)	Improve the quality and inventory of research and teaching spaces
4.3 f) g)	Improve the effectiveness and efficiency of administrative and operational processes aligned with our academic mission

1. Strategic Goal: Outstanding Education

1.1 Dalhousie Engineering will provide excellent teaching

a. Hire full-time faculty dedicated to the first two years in Engineering

Responsibility: Dean, Associate Dean Undergraduate Studies
Timeframe: two years

b. Provide teaching support for faculty

Responsibility: Dean, new Curriculum Coordinator
Timeframe: one year

c. Further improve opportunities for student engagement to better connect students with their respective department in Year 2

Responsibility: Core Director, Associate Dean Undergraduate Studies
Timeframe: one year

d. Develop a graduate attributes approach that meets accreditation requirements, improves our curriculum and maintains the quality of our programs

Responsibility: Associate Dean Undergraduate Studies
Timeframe: two years

1.2 Dalhousie Engineering will create a first class learning environment

a. Create comfortable and efficient classrooms that enable the use of the full range of communication technologies in every course. A big part of this will involve redeveloping existing space as well as the construction of new buildings on Sexton campus which will have versatile rooms and enough large classrooms to ensure our seating needs are met in Year 1 and Year 2

Responsibility: Dean
Timeframe: five to ten years

b. Create safe and efficient teaching laboratory facilities that allow our students to engage in the most up-to-date laboratory work. A standing Laboratory Committee will be created to regularly assess our current teaching lab resources, lab safety, lab equipment and to make plans for any improvements that might be required

Responsibility: Faculty of Engineering Undergraduate Studies Committee (USC)

Timeframe: ongoing

*c. **Develop and adopt approaches to use existing classroom space more wisely, e.g. MECH's labs in morning/lectures in afternoon swap for Year 3 and Year 4***

Responsibility: Department Heads
Timeframe: two years

*d. **Grow enrollment in proportion to increases in faculty complement and resources without sacrificing admission quality***

Responsibility: Dean, Registrar
Timeframe: three to five years

*e. **Focus on improving co-op as an academic part of our program e.g. develop ways to enhance the experiential learning***

Responsibility: Assistant Dean Coop
Timeframe: one year

*f. **Our student population is growing and we need to develop a strategy to assess and identify those in need of assistance (e.g. with language problems or learning disabilities) and ensure we have the resources in place to provide it***

Responsibility: Associate Dean Undergraduate Studies
Timeframe: one year

*g. **Promote a safety culture and safety-related activities through the Faculty Safety Committee, lab audits, and a safety certification program for students***

Responsibility: Dean
Timeframe: one year

*h. **Provide a broad offering of graduate courses that meets the needs of graduate students and encourages multidisciplinary learning***

Responsibility: Faculty of Engineering Graduate Studies Committee (GSC), Department Heads
Timeframe: two years

*i. **Coordinate initiatives to attract more women into Engineering***

Responsibility: Department Heads Committee
Timeframe: one year to create and implement a plan

*j. **Develop a strategy for offering senior-year technical electives across departments***

Responsibility: Undergraduate Studies Committee
Timeframe: one year to create and implement a plan

2. Strategic Goal: Engineering Research Excellence

2.1 Dalhousie Engineering will develop areas of strategic focus that can have a high impact in targeted sectors

a. Departments in Dalhousie Engineering will create Research Advisory Boards composed of representatives from Dalhousie, industry, and government. These boards will provide advice and guidance to help identify strategic research areas that are consistent with the research strengths of the Faculty and the research priorities and strategic goals of the University and assist in developing a strategy for establishing and improving engineering research.

Responsibility: Department Heads Committee
Timeframe: establish Boards by August 2016

b. Initiate a search for an Associate Dean of Research and Industry to help facilitate research and development among faculty and industry, to work with departments to establish areas of strategic research focus, and to help faculty members refine their grant-writing skills

Responsibility: Dean of Engineering
Timeframe: initiate search by January 2016

2.2 Dalhousie Engineering will foster a supportive research environment that will provide faculty members with access to excellent facilities and top-notch technical staff

a. Hire a Faculty IT Technician to help provide support with computer hardware and software, electronics, and instrumentation

Responsibility: Dean of Engineering
Timeframe: hire new Faculty IT Technician by May 2016

b. Reduce redundancy of equipment and tools for faculty, staff and students

Responsibility: Department Heads Committee, Faculty Engineer
Timeframe: one year

c. Continue to strive to attract top quality graduate students through research excellence and scholarship

Responsibility: Faculty of Engineering GSC

Timeframe: May 2016 to assess current state, with annual reporting to the Faculty

3. Strategic Goal: A Key Resource for the Community

3.1 Dalhousie Engineering will foster direct industry interaction and involvement in education and research

a. Increase the portion of senior design projects that have industrial clients

Responsibility: Design Chair and Engineers in Residence
Timeframe: May 2016 to assess current state, with annual reporting to Faculty

b. Improve our effectiveness in working with industry (streamline processes so collaborations move at the pace of business)

Responsibility: new Associate Dean of Research
Timeframe: first find Associate Dean of Research

3.2 Dalhousie Engineering will foster and promote more involvement and outreach with community groups

a. Increase outreach to community

Responsibility: Department Heads Committee
Timeframe: annual

b. Increase involvement with granting agencies (e.g. NSERC)

Responsibility: new Associate Dean of Research
Timeframe: Dependent on the appointment of the Associate Dean of Research

4. Strategic Goal: A Great Place to Work

4.1 Dalhousie Engineering's physical infrastructure will be modernized, and processes for operation and maintenance will be established, along with a clear plan for continual improvements

a. Establish an ad hoc Infrastructure Committee that will (a) develop an infrastructure inventory, (b) identify issues, (c) propose remedies or upgrades to accommodate needs, and (d) propose a strategy for addressing problems effectively

Responsibility: Department Heads Committee

Timeframe: committee to report by end of September 2016

4.2 Dalhousie Engineering will improve its ability to communicate its news and achievements with the wider community

a. Create a Communications Committee, comprised of the editor of the newsletter, our webmaster and several professors, which will develop a strategy to improve both internal and external communication

Responsibility: Dean
Timeframe: establish a communication committee by May 2016

4.3 Dalhousie Engineering will ensure that all staff and faculty will have opportunities for professional development

a. To support the effort to attract and retain outstanding professors, establish a formal mentorship program that will (a) help new faculty members understand Dalhousie's administrative and financial systems, (b) provide advice and guidance in areas such as writing grants and setting up a research program. Faculty members at all levels of experience will likewise be encouraged to participate in professional development opportunities.

Responsibility: Department Heads Committee
Timeframe: one year

b. To attract and retain outstanding staff, establish a formal mentorship program that will help new staff understand Dalhousie's administrative and financial systems, and encourage staff at all levels of experience to participate in professional development opportunities

Responsibility: Department Heads Committee
Timeframe: one year

c. Develop a balanced workload for faculty and staff (particularly in light of growth in the Faculty) by establishing a Workload Committee to review current teaching, research and administrative workloads, analyze course offerings across departments to find opportunities for amalgamations, and formalize workload requirements for new faculty and staff

Responsibility: Department Heads Committee
Timeframe: form committee by January 2016 and report back to faculty by January 2017

d. Improve the capacity for faculty members to take on leadership roles by, for example, improving the recognition for administrative service, improving training for faculty administrative and management roles, providing additional support to avoid Department Heads feeling obligated to take on additional teaching to fill gaps in departments, increasing engagement, and providing better support for bringing faculty up through committee-level responsibilities

Responsibility: Dean, Department Heads Committee
Timeframe: one year

e. Investigate the potential benefits of making Faculty Council a representative/elected council

Responsibility: Steering Committee
Timeframe: one year

f. Review processes in the Dean's office to determine whether its administrative resources are sufficient and to see where processes could be streamlined (e.g. eliminate red tape and unnecessary signatures)

Responsibility: Dean
Timeframe: one year

g. Implement a system that will make it easier to track the information contained in the annual reports of faculty members.

Responsibility: Dean
Timeframe: implement tracking spreadsheet for April 2016 annual reporting cycle

h. Improve the Faculty website

Responsibility: Dean
Timeframe: one year