4. Educating Future Engineers & Student Experience

Our commitment to providing the highest quality education and enriching the student experience has never been stronger. As we continue into the second half of our five-year Academic Plan, we have taken a number of actions to meet these goals, and to support and promote the ongoing development of global engineering leaders. Several of these goals have already been met.

To prepare our students for success in our complex and globalized environment, we must ensure that they are exposed to a wide range of perspectives, experiences, and beliefs. For this very reason, we are extremely proud of our improved cultural and gender diversity. As a Faculty, we have established a goal of 25 per cent international students at both the undergraduate and graduate levels. We are close to achieving that goal. Our preliminary data for 2014-15 show that international students now comprise 25.9 per cent of the overall undergraduate class. Having reached our target of 25 per cent undergraduate international students, we are now taking this opportunity to investigate how we can diversify the regions of the world that our students come from.

We also understand that by attracting more female students to our undergraduate programs, many will move into graduate programs and industry, ultimately benefiting the engineering profession as a whole. We continually assess and refine our strategic recruitment activities in this area. In addition to hosting the third annual Girls’ Leadership in Engineering Experience (GLEE) event, we added a new component to our March Break Open House that specifically targets prospective female students. For 2014-15, our preliminary data indicate that our overall undergraduate female population grew to 25.8 per cent compared to the previous year’s 24.8 per cent. We will actively pursue continued growth in this area.

The diversity of our student body is further enriched by undergraduates who participate in exchanges and country-sponsored programs. Last year we hosted nearly 50 exchange students from countries including Australia, India, China, France, Mexico, and South Korea. We remain the number one choice in the world for undergraduate Science without Borders (SwB) students from Brazil with over 300 enrolled in classes in 2013-14.

U of T Engineering experienced yet another record-breaking year in applications to our undergraduate programs, both in terms of quantity and quality. We received 11,132 applications for 1,130 spots, a 10 per cent increase over last year. The final average for students from Ontario high schools is 92.3 per cent, the highest ever recorded by the Faculty. Recognizing that this brilliance is demonstrated by more than just grades, we are taking this opportunity to invest in a broad-based admissions approach that will not only take into account marks, extra-curricular activities and essays but will also include interviews with the applicants to assist in our decision making process.
We are also pleased that our first-to-second year retention rate has increased to 94.6 per cent. This is a result not only of our increased selectivity and high calibre of students, but of the support programs and services we have developed and introduced. These include First Year Foundations, Success 101, first year math support, and an extensive advising program that provides embedded counsellors, an international transition advisor, a learning strategist, and a wellness coordinator.

We continually assess the effectiveness of both our curriculum and our course delivery. Over the past year, we have piloted and refined a number of technology-enhanced and hands-on learning opportunities for our students. On the technology side, we piloted two online first year courses in calculus with engineering applications (APS162 and APS163) with 30 and 20 students participating, respectively in 2013-14. The online version of APS162 was also made available during the summer for incoming students wishing to complete one credit before starting in September 2014. Fifty-one students participated, with 86 per cent passing the course. The Faculty was also awarded funding for three proposals through the Ontario Ministry of Training, Colleges and Universities' Shared Online Course Fund to further develop the above mentioned “Calculus with Engineering Applications I and II” courses, and a mechanics course, that will be made available to students at other Ontario universities. As mentioned in our Year 2 Progress Report, we developed our first massive open online course (MOOC) entitled “The Energetic Earth.” It was featured on the edX platform and received over 10,000 registrations. Materials created for the MOOC were repurposed in CIV300 “Terrestrial Energy Systems.” Following this experience, we developed a new MOOC entitled Wind, Waves and Tides: Alternate Energy Systems that was launched on the Coursera platform in October 2014.

More and more, our educators are adding value to the student experience by developing reusable learning tools and capturing lectures in digital formats that can be made available to students outside of class time. This allows for more discussion and problem solving during class. The lecture capture of all first year Core 8 courses (with the exception of APS105) for the first time in fall 2013 is a step in this direction. Additionally, we offered two inverted classroom model courses with ECE221 “Electricity and Magnetism” (for the second time) and CIV235 “Engineering Graphics.” This experimentation with alternate methods of course delivery allows us to engage our students in different ways and assess the effectiveness of learning strategies on the quality of education. The new Centre for Engineering Innovation and Entrepreneurship (CEIE) will house several Technology Enhanced Active Learning (TEAL) classrooms that will facilitate this type of interactive classroom engagement. Over the summer, we renovated a classroom in Sandford Fleming (SF3201) into a TEAL room to gain more experience in this area. We currently have 24 tutorials and lectures utilizing the space and we will use what we learn over the next year to inform our decisions for the TEAL rooms in the CEIE.

While technology plays an important role in both teaching and learning, we must also encourage the hands-on “tinkering” that engineering requires, and is traditionally known for. We have increased the number of opportunities for students to nurture their inner “maker” and work in teams to effectively bring their ideas to life. This year, we
implemented our Multidisciplinary Capstone Projects (MCPs) course through the
University of Toronto Institute for Multidisciplinary Design and Innovation (UT-IMDI),
which brought together teams of four-five students (all from different departments) to
develop solutions to industry-sponsored problems. The pilot was very well received, with
17 projects and 65 students garnering outstanding feedback from industry involved (e.g.
Bombardier, Magna). Our cross-cultural capstone course, where mechanical and
industrial engineering students partner with peers at Peking University in China,
continues to flourish. Students work together on client-based projects with companies
that have operations in both Canada and China, and have two face-to-face meetings
throughout the year, with the remaining interactions being conducted online.
Participation has grown from 12 students in 2011-12 to 17 in 2013-14, speaking to the
increased appeal of this type of program.

The Engineering Instructional Innovation Program (EIIP) was created in 2013 to
develop innovative teaching approaches for larger undergraduate courses that have
broad impact across the curriculum. The inaugural projects approved through the EIIP
focused primarily on developing reusable learning objects to facilitate teaching and
improve the learning experience, and are now into their second year. Recently, we
approved three projects that will focus on: (i) curriculum renovation of a core second
year ECE course, (ii) improving students’ ability to make informed and meaningful
decisions when ethical situations arise, and (iii) creating resources to support instruction
of team effectiveness in non-traditional classroom settings.

Over the past year, the Faculty has introduced new certificates and a minor to allow
undergraduate students to further customize and receive recognition for their focus on
specific areas. The Certificate in Engineering Leadership focuses on the cognitive and
psychological foundations of effective leadership, helping students to think analytically
and systematically, and to effectively handle complex challenges. The Certificate in
Renewable Resources Engineering offers interdisciplinary courses, in collaboration with
the Faculty of Forestry, in sustainable resource management, bio-economies, sustainable
energy production, product manufacturing and sustainable communities. The new
Biomedical Engineering Minor prepares students for direct entry into the applied
biomedical engineering industry, offering courses on the technologies, systems and
policy in the field. This is also the first minor to include supporting curricular and co-
curricular activities such as mentoring, a seminar course, and optional courses in
biostatics and biodesign.

The value of our cross-disciplinary minors and certificates is certainly recognized by our
students. Enrolments continue to increase, with 825 students participating in our five
minors in 2013-14. The most popular by far remains our Engineering Business Minor.
Classes fill up within minutes and there are long wait lists. To meet demand, we further
expanded offerings for the three joint core courses. These core courses are now offered in
20 sections throughout the year. We also expanded the number of summer course
offerings to include all three of these courses, along with a technical elective in nuclear
engineering for the new Nuclear Engineering Certificate program, and an energy policy
course for the Sustainable Energy Minor.

Academic Plan 2011-2016 — Year Three: Progress and Achievements
Executive Summary
Our culture of entrepreneurship has been further strengthened by the contributions of the Entrepreneurship Hatchery. In addition to speaker seminars and other events throughout the year, students are offered the dedicated space and guidance to develop their fledgling business ideas. This past year, we more than doubled the number of student teams participating in the Hatchery's summer program from 18 to 37. This surpasses our four-year goal – in less than three years – of 20 student teams. Thirteen teams presented their prototypes at the annual demo day held in September 2014 with the $20,000 Lacavera Prize going to FuelWear, a company which offers “the first smart heated base layer” for users looking to stay warm for up to five hours.

Creating opportunities for students to build on their competencies through professional development opportunities is vital to expanding their understanding of the world and developing global engineers. Through a mix of Faculty and student-run programs and initiatives, these opportunities have continued to increase.

Over 2,000 students attended the 2014 You're Next Career Fair organized by the You're Next Career Network, a student led organization. This year a larger number of industries were represented and over half of the employers participated for the first time, speaking to the growing reputation of this annual event. A second event hosted by the You're Next Career Network, the inaugural Start-up Career Exposition, was a tremendous success with over 85 start-ups participating from across North America.

The Faculty’s Professional Experience Year (PEY) program is one of the most recognized paid internship programs in Canada. Over 60 per cent of our third-year students participate in the program and many come back for their fourth year with job offers for after graduation. The program has fully recovered from the economic downturn of 2008 and 2009 with placements rising steadily to an all-time high of 723, up from 704 in 2013-14. These students will earn over $45-million collectively during their PEY term. PEY placements abroad have remained steady with 61 placements this year.

At each Dean's town hall, job preparation and professional experience is a topic of discussion. We know that we can always do more to give our students the competencies and support they need to succeed in the world post-graduation. With this in mind, we created a task force to holistically review the professional development services offered by both the institution and student run organizations. The task force, comprised of academic, administrative, and student leadership, along with alumni, met over the summer and have scheduled stakeholder consultations for the fall of 2014.

Another mechanism the Faculty uses to solicit student feedback is course evaluations. In the fall of 2013, we moved to a new professionally validated evaluation system, designed to give both summative and formative feedback on teaching. It informs our leadership about how well instructors are meeting the perceived teaching needs of our students and provides input on ways to improve. One immediate outcome has been a marked increase in the amount of qualitative feedback students have provided. And, notably, even on the first round of evaluations, scores were especially high overall on the question that asked
how well instructors related course concepts to practical applications and/or current research.

A recurring theme in past evaluations related to the varying quality of tutorial teaching by Teaching Assistants (TAs). Over the summer, we launched an aggressive effort to prepare our TAs who lead tutorials. The TAs are trained on how to run an active, collaborative tutorial effectively so our students have the opportunity to practice applying concepts and principles in a supportive, facilitated tutorial environment. The techniques taught in the training session are based on current best practices in engineering education.

Our first year curriculum is the foundation upon which all future years of study rest. With this in mind, the Faculty undertook a review of our first year curriculum, something last done a decade ago. We appointed a task force who met with constituents at Faculty Council, town halls, and departmental meetings to gather input. They also reviewed best practices at peer institutions as well as relevant literature. Feedback is being synthesized into a number of recommendations that will start being implemented throughout 2014-15. The focus will centre on areas such as improved first year teaching and course delivery, in depth mathematics and science curriculum reviews, integration between courses, and transition to the University learning experience.

Our world-renowned graduate and research programs continue to attract the world’s brightest engineering minds. In 2013-14, the Faculty reached an all-time high of 2,064 graduate students, an increase of nearly 40 per cent over the last five years. This surpasses our Academic Plan goal, two years early, of 2,000 graduate students by the year 2015.

As previously mentioned, enriching the environment with diversity of thought, background, and experience leads to new ideas and collaborations that would otherwise not have been possible. Enrolment of women in our graduate programs was relatively on par with last year at 25.9 per cent, while our international enrolment rose to an all-time high of 24.6 per cent in 2013-14. We anticipate that these numbers will continue to climb, particularly as we continue to increase our gender and cultural diversity in our undergraduate program. Additionally, we have expanded our involvement in the Science without Borders program to offer new scholarship options to Brazilian PhD students and, if our experience with the undergraduate program is any indication, we will be the destination of choice for these students in the near future.

Recruitment initiatives and our global reputation influence applications to our graduate programs, as demonstrated in the 25 per cent increase to our professional master’s program over last year. For the second year, we have partnered with the top Canadian engineering schools for the Canadian Graduate Engineering Consortium. Events are held across the country to connect with high quality domestic applicants to encourage them to learn more about our programs. Additionally, this is the first year that we are organizing a Faculty-wide recruitment weekend (scheduled for February 2015) that will bring
promising domestic students to U of T, providing them an opportunity to discover the benefits of learning and working with our world-renowned researchers.

We continue to develop new programs to offer graduate students opportunities to collaborate across the Faculty and the University. This past year, U of T Engineering partnered with the Ontario Institute of Studies in Education (OISE) to develop and launch Canada’s first collaborative program in Engineering Education (EngEd) at both the master and PhD levels. This initiative brings together graduate students from disciplines in engineering and education with shared interests in the research and learning that is at the nexus of education and engineering practice. Ultimately, the program will yield research findings that will benefit STEM learning in K-12, university-level engineering instruction, and continued professional training after post-secondary education.

The Centre for Global Engineering’s *Interdisciplinary Approach to Addressing Global Challenges* course brought together graduate students from across U of T to address childhood malnutrition in Bangladesh. Students developed integrated solutions that combined expertise from U of T Engineering, the Dalla Lana School of Public Health, the Rotman School of Management, and the Munk School of Global Affairs.

The Faculty also expanded our offerings at both the MEng and PhD levels. Two new emphases, Advanced Water Technologies & Process Design, and Sustainable Aviation, provide students with in-depth knowledge of water treatment methods and development of sustainable aircraft, respectively. During 2013-14, we also introduced 15 new graduate courses, including a number of APS courses that are offered to graduate students Faculty-wide. Finally, the Faculty MEng Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE) certificate courses are now being administered centrally, which increases efficiency and better accommodates the needs of instructors and students.

The flex-time PhD option, previously only available in mechanical and industrial engineering, is now offered in our chemical engineering and applied chemistry, and aerospace programs. The expansion of this program enables us to attract highly qualified and motivated engineers who work full-time in research and development roles, to pursue doctoral degrees in areas of interest to them and their employers. In doing so, new partnerships are formed that transfer vital knowledge and skills between U of T researchers and industry collaborators.

In the coming year we will continue to assess and refine many of the activities and initiatives discussed throughout this section. The list below highlights our progress thus far toward our goals of educating future engineers and enhancing the student experience.

### 4.1 EDUCATING FUTURE ENGINEERS: YEAR 3 PROGRESS HIGHLIGHTS

*4.1.1 Maintain and strengthen our high-quality education through continued review and assessment of our programs and curricula for currency, vision and relevance. Establish desired learning outcomes for graduate and undergraduate students to*
ensure they are well prepared as future engineers. Evolve our cyclic reviews and plan for continuous quality assessment within the new UTQAP and CEAB Graduate Attribute systems.

- Established a task force to review the first year curriculum; following broad consultation with students, faculty and staff, recommended changes to Chairs & Directors with implementation planned for 2014-15
- Collected outcomes data through the Graduate Attributes Committee
- Continued development of analytic rubrics to measure learning in several areas related to Graduate Attributes and Undergraduate Degree Level Expectations (UDLEs)

4.1.2 Further integrate professional competencies, such as global engineering, entrepreneurship, leadership and communication into undergraduate and graduate curricula. Define, assess and measure our programs and curricula successes through the UTQAP UDLEs, GDLEs and cyclic reviews and through the CEAB Graduate Attributes.

- Established the undergraduate Certificate in Engineering Leadership
- Created new undergraduate and graduate courses offered through the Institute for Leadership Education in Engineering (ILead)
- Provided multi-year start-up funding through the Dean’s Strategic Fund in support of proposals to enhance leadership education, entrepreneurship activities, and global engineering initiatives
- Conducted external review of the Engineering Communication Program in November 2013

4.1.3 Enrich the quality of undergraduate academic experience by increasing flexibility in the undergraduate curriculum, continuing to develop progressive opportunities for students to pursue their professional interests, and integrating professional competencies throughout the curriculum.

- Through the Undergraduate Curriculum Committee, continued to assess and adjust curriculum in all programs, as necessary
- Launched the undergraduate Biomedical Engineering Minor
- Expanded sections and summer offerings of core Engineering Business Minor courses to meet demand
- Developed undergraduate certificates in Engineering Leadership and Renewable Resources Engineering
- Realized steady growth in our Professional Experience Year (PEY) program with 723 engineering students placed (up slightly from 704 the previous year)

4.1.4 Continue to support and enhance undergraduate students’ opportunities for self-directed learning and study time, and participation in the enriching extracurricular activities within our Faculty, across the University, and beyond.
• Piloted online courses for Calculus with Engineering Applications I and II (APS 162 and 163) with the online version of APS 162 also offered during the summer for incoming students wishing to complete one credit before starting in September 2014
• Developed an online version of CIV 100 – Mechanics (APS 160 – Mechanics) for the 2014-15 academic year
• Created our second massive open online course (MOOC), this time on the Coursera platform, in Wind, Waves and Tides: Alternate Energy Systems (offered beginning October 2014)
• Provided lecture capture for the majority of our first year Core 8 courses, allowing students to review lectures outside of class
• Piloted an inverted classroom model in Electricity and Magnetism (ECE 221) and in Engineering Graphics (CIV 235), enabling students to review material in advance and use class time for more hands on engagement with instructors

4.1.5 Enhance our instructional space to facilitate innovative teaching methods and create efficiencies on how we share space. This includes flexible interactive teaching space for substantial numbers of students, design and group project space and lecture/lab combination space.

• Established a prototype Technology Enhanced Active Learning (TEAL) classroom in SF3201; 24 tutorial and lecture sections are actively using this space in fall 2014
• Through matching from the Dean’s Strategic Fund, significantly upgraded equipment in the IBBME Undergraduate Teaching Lab
• Developed plan for a new 64 seat capacity computer lab in the CEIE building, along with significant informal student study seating in common areas throughout the building
• Commenced third phase of our space audit to address the significant shortage in undergraduate teaching labs space through the establishment of selected generic undergraduate labs that would be used to support multiple courses across departments

4.1.6 Provide reliable, accessible, effective computing services and study spaces within and outside computer laboratories, library and classrooms to enhance efficient interactive learning and socialization where today’s student ‘lives’.

• Added 88 student study spaces to the Bahen Centre inventory of hallway seating
• Upgraded half (200) of the ECF lab PCs and all (400) of the monitors to high quality 24” LCDs
• Established a new MIE computer lab in the Lassonde Mining Building
• Approved funding for 5 Dean’s Strategic Fund proposals to improve design, club, and meeting spaces throughout the Faculty
• Renovated SF3201 into a Technology Enhanced Active Learning (TEAL) classroom

4.1.7 Link the quality of student learning, the quality of their education and their improved future performance with teaching effectiveness. Continue to inspire and support the Faculty’s culture of teaching excellence and encourage Faculty members and teaching assistants to reflect upon their teaching effectiveness through
enhanced feedback mechanisms. Support teaching initiatives and opportunities that will improve their professional development as educators.

- Moved to a professionally validated course evaluation system which informs our academic leadership about how well instructors are meeting the perceived teaching needs of our students and provides input on ways to improve
- Implemented new TA training over the summer of 2014 to improve quality of tutorials
- Hosted 2nd annual First Year Instructors Day in summer 2014 to discuss best practices

4.1.8 Continue to attract and retain diverse, outstanding students from a wide range of backgrounds in order to provide an exceptional education for future global engineers and leaders. In particular, we must strive to attract more female students into our programs.

- Hosted the third year of Girls' Leadership in Engineering Experience (GLEE), with the majority of participating female students accepting their offers to U of T Engineering
- Added a new component to the March Break Applicant Event – Engineering Mythbusting – featuring panel sessions run by students targeting common misconceptions
- Female applications rose in 2014 to 23% from 21% the previous year; women currently make up 30.5% of the first year class and 25.8% of the overall class (preliminary, 2014-15), and 26% of the graduate class
- International students comprised 25.9% of the overall undergraduate class, surpassing our goal of 25% (preliminary 2014-15) and 25% of all graduate students

4.1.9 Strategically award admission scholarships to meet our student recruitment goals.

- Continued participation in the University-wide President's Scholars of Excellence Program with unique elements added for engineering students
- Reviewing all scholarships and awards with the goal of improving visibility and participation

4.1.10 Reduce the dwell time for MASc and PhD students and address time-to-graduation issues.

- Reduced time-to-graduation to 5.2 years (overall) compared to 5.3 the previous year
- Began development of detailed data on time-to-completion and fast tracking with the goal of using the data to identify and share best practices, as well as identify problems to be addressed
4.1.11 Continue to develop vibrant MEng programs and offer a larger variety of courses suitable to MEng students.

- Introduced 15 new courses, including a number of APS courses that are offered Faculty-wide
- Launched new graduate emphases in Sustainable Aviation and Advanced Water Technologies & Process Design
- Developing graduate emphases in sustainable energy and advanced manufacturing

4.1.12 Increase graduate student enrolment to reach 2,000 graduate students by 2015, with particular focus on increasing PhD and MEng students and aiming to reach an average of one PhD graduated annually per faculty member. At the same time, we will endeavour to reduce our undergraduate student enrolment to 4,000 by 2015, with 25% of undergraduates consisting of international students. In fall 2010, Full-Time Equivalents (FTEs) were 4,599 undergraduate and 1,527 graduate students, a percentage ratio of 75.1% to 24.9%.

- Met and surpassed goal with 2,064 graduate students enrolled in 2013-14
- Marked progress towards our long term goal of a 60%:40% undergraduate to graduate student ratio (currently 2.6:1 from 3:1 in 2010)
- Applications to our MEng programs increased by 34% over last year and more than 100% over 5 years ago

4.2 STUDENT EXPERIENCE: YEAR 3 PROGRESS HIGHLIGHTS

4.2.1 Ensure that all our undergraduate curricula provide students with sufficient self-directed time to fully reflect on and understand the material in their program, the vision and relevance to ‘learn how to learn,’ and the advantage of taking opportunities to experience and engage in University life outside the classroom through extracurricular and co-curricular activities.

- Piloted Facilitated Study Groups (FSG) in 2013-14, hired 11 leaders to support 17 first year courses through the supplementary instructional model that promotes the development of critical thinking skills
- Rebranded these FSG sessions in 2014 as Peer Assisted Study Sessions (PASS) and implemented more intentional scheduling and marketing to improve attendance; currently supporting 6 courses this term (3 Core 8 and 3 EngSci)
- First year retention rate increased to 94.6% in 2013-14 from 93.7% the previous year
- Engaged the inverted classroom model in two courses (ECE 221 and CIV 235), allowing students more time in class for inquiry, application and assessment of material with instructors
- Provided tools and resources in support of 37 project teams (109 students) taking part in the Entrepreneurship Hatchery’s summer program

4.2.2 Engage more undergraduates in faculty research activities. Enhance summer opportunities for our undergraduates by expanding the Engineering Summer Internship Program (eSIP) and by increasing summer research opportunities both
within the Faculty and through agreements with international institutions.

- Summer research abroad participation increased from 9.7% in 2012-13 to 15% in 2013-14
- Proactively researched and identified eligible eSIP opportunities from a wide variety of sources and made them available on the Engineering Career Centre portal, offering 40 additional opportunities
- Targeted outreach to industry partnerships to create more eSIP opportunities
- Signed Memorandum of Understanding (MOU) for student exchange with TU Darmstadt, one of Germany's highest ranked universities in both teaching and research, opening the door for some of our brightest Engineering Science students to participate in summer research

4.2.3 Enhance our students’ access to electives outside technical courses.

- Continued discussions with the Faculty of Arts & Science regarding a mutual interdivisional teaching agreement
- Improved access to popular Arts & Science courses for undergraduates with 670 spaces reserved for engineering registration
- Significantly increased the number of sections in our Joint Rotman School-Engineering courses for the Engineering Business Minor and Certificate over the last 3 years from 5 to 20

4.2.4 Enhance our undergraduate and graduate students’ non-traditional educational opportunities, including international academic exchanges and internships, courses offered abroad, field courses, and credit for work in extracurricular activities such as design teams.

- For the second year, participated in the Globex Program at Peking University (PKU) with 5 MIE students taking part in an intensive four-week summer program at PKU, exposing them to new ideas, research, people, and culture
- Select MIE students worked with counterparts at PKU on cross-cultural capstone projects; students work together (virtually and in person) to arrive at solutions to problems proposed by clients who hold operations in both Canada and China, such as GM and Bombardier
- Implemented a new route to exchange through the APS 299 course, which will be a credit bearing course for some students who do research abroad and choose to structure it as a course
- The Entrepreneurship Hatchery provided guidance, tools and resources to 109 students in 37 project teams as they developed their business ideas and technical innovations

4.2.5 Continue to inspire the Faculty’s culture of teaching excellence and support teaching initiatives that improve student experience, support their connections with course content, increase in-class engagement and strengthen students’ understanding of course relevance.
• Hosted 2\textsuperscript{nd} annual First Year Instructors Day with approximately 30 people in attendance
• Appointed a task force to review the first year core curriculum; following broad consultation, presented recommendations to Chairs and Directors, implementation is anticipated for 2014-15
• As previously mentioned, renovated SF3201 into a TEAL classroom, and piloted two inverted classrooms
• Through the Engineering Instructional Innovation Program, funded 3 projects that will: (i) create case studies on ethics and decision making, (ii) renovate second year ECE courses that have broad implications in future years, and (iii) train instructors on teaching and evaluating teamwork beyond traditional methods

4.2.6 Promote extracurricular activities through communications, faculty mentoring and suitable space and facilities.

• Consolidated student clubs’ space at 256 McCaul Street and 70 Spadina Ave, including music clubs, establishing a new multi-purpose room for events and rehearsals
• Approved funding for 5 Dean’s Strategic Fund proposals to improve design, club, and meeting spaces throughout the Faculty
• Installed a large-scale projection system, tied to the Faculty’s digital display network, which allows the Engineering Society and its affiliated clubs to display digital banners

4.2.7 Actively engage and support students in their unique academic and non-academic experiences as soon as they enter our Faculty, so they can thrive throughout their studies.

• Enhanced several elements of First Year Foundations; over 150 students attended Success 101 in summer 2014
• Prepared a series of short videos based on Success 101 material (e.g. study habits, time management, academic orientation) and posted these on YouTube for international students and students outside the GTA
• Offered the math transition program which allows students entering first year to assess their math skills and attend remedial tutorials early on if necessary
• Developed and implemented new programming to support international student transition, expanded our mentorship program, and created a new International Transition Advisor role

4.2.8 Engage Master of Engineering (MEng) students to improve the quality of their experience.

• Expanded MEng offerings with new emphases in Sustainable Aviation and Advanced Water Technologies & Process Design
• Introduced 15 new courses, including a number of Faculty-wide graduate courses
• Streamlined the administration of our Faculty-wide Entrepreneurship, Leadership, Innovation and Technology in Engineering (ELITE) certificate courses to facilitate the needs of students and instructors
• Moved to a new online course evaluation system for graduate courses in fall 2014 to provide enhanced feedback to instructors on the quality of their teaching

4.2.9 **Enrich graduate students’ academic life and build a stronger sense of community among graduate students across the Faculty.**

• Launched Canada’s first collaborative program in Engineering Education (EngEd) at both the master and PhD levels in partnership with OISE; bringing together graduate students from disciplines in engineering and education with shared interests in the research and learning that is at the nexus of education and engineering practice
• Implemented new TA training over the summer 2014