

Fourth Annual Report

2009-2010



LEADERS *of* TOMORROW

FACULTY OF APPLIED SCIENCE AND ENGINEERING, UNIVERSITY OF TORONTO

Engineering Leaders of Tomorrow: Fourth Annual Report 2009-2010

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Leaders of Tomorrow: *An Engineering Student Leadership Development Program*

May 1, 2009 – April 30, 2010

Welcoming Message

We are pleased to present the Engineering Leaders of Tomorrow (LOT) Program's fourth annual report. This academic year has been truly remarkable for us, as you will soon discover.

There is a need to prepare engineering students to address increasingly complex global challenges. This need is recently and compellingly demonstrated by the ongoing ecological disaster of the BP/Deepwater Horizon oil spill in the Gulf of Mexico. Engineering students have tremendous potential, and when given the opportunity to develop themselves as ethical leaders, their capability will increase.

We want to acknowledge and thank all those involved with LOT. Without the time, commitment, energy, enthusiasm, and hard work of countless individuals we would not have much to share with you. As always, we welcome your interest and value your feedback.

The Leaders of Tomorrow team,
June 2010



From left: Annie Simpson, Assistant Director; Prof. Doug Reeve, Co-Leader;
Prof. Greg Evans, Co-Leader

Executive Summary

The Engineering Leaders of Tomorrow Program (LOT) is a unique, comprehensive student leadership development program. It has grown tremendously since its inception as a faculty-wide initiative in 2006. This year we held a total of 251 events, reaching 7,646 student contacts. This represents a 31% increase in the number of events delivered compared to the previous year. The year also marks a period of reorganization and expansion for the LOT team. Staff positions have evolved towards increasingly focused roles to enhance program planning and delivery.

Our Curricular Program has grown significantly. This year we introduced two new academic courses, APS1010: *Cognitive and Psychological Foundations of Effective Leadership*, and APS1011: *Concepts and Applications of Authentic Leadership*. Our first course APS501: *Leadership and Leading in Groups and Organizations* was offered for the third time last fall. All three courses have received overwhelmingly positive feedback. Formal course evaluation results show students rated these courses well above the Faculty average for all parameters. We have also continued our Leadership Infusion Lecture Series, launched in 2008-2009. This year we delivered 17 lectures, reaching 2134 engineering students. Student feedback has been positive, with most students indicating that they found the lectures to be informative, engaging, practical, valuable, and well-delivered.

Our Co-Curricular Program also expanded this year with the introduction of a second certificate program, entitled 'Self-Leadership: Leading from the Inside Out', which was offered in the fall term. Student feedback was overwhelmingly positive. Our first certificate program 'Team Skills', introduced last year, was offered again in winter 2010 due to student demand. Interest for both certificate programs has been exceptional as we received far more applications from students than space permitted.

Our Extra-curricular program continued to offer a wide range of choice to students for exploring different facets of leadership development. Some of the many successful events included a 'Leadership Training Day' in November, 'Engineering the City' led by Mayor David Miller in January, and 'Leading in a Diverse World' with Shakil Choudhury of Anima Leadership in March. We have also worked closely with a number student clubs to strengthen our ties to student leaders. Additionally, LOT organized its first annual 'Summer Institute on Leadership Education' in partnership with the Office of Teaching Advancement (now 'Centre of Teaching Support and Innovation') and the Office of Student Life in June 2009 for faculty and staff across the University.

Dean Amon established the *Task Force on Engineering Leadership Education* in October 2009. The Task Force examined LOT's progress, conducted a series of focus groups, discussed leadership development with peer universities, and made recommendations for action. It recommended the creation of the 'Institute for Leadership Education in Engineering' (ILead) to deliver teaching, research, and outreach in the realm of engineering leadership development. The motion to create the Institute was passed at Faculty Council on May 26, 2010. LOT will function under the umbrella of ILead.

We will remember the 2009-2010 year as a watershed in the program's history. This year we have offered more events, more academic courses, more certificate programs, and more scholarships and awards than ever before. Propelled by the positive response we have received from students, LOT aspires to continue growing towards its vision of *an engineering education that is a lifelong foundation for transformational leaders and outstanding citizens*.

Program Overview

Background and History

The Engineering Leaders of Tomorrow Program (LOT) is a unique, comprehensive student leadership development program for engineering students.

We believe that leadership education will allow engineering graduates to contribute more effectively to positive social change and innovation. Today's complex global issues increasingly demand engineers who are successful problem solvers and responsible leaders. As a result, leadership is implicitly becoming a desirable outcome of an engineering education. Until recently, structured leadership education was not part of any engineering program in Canada. The LOT program is the culmination of a long-term initiative to incorporate leadership into Canadian engineering education in a deliberate and intentional way.

The program has been designed and delivered by a collaborative team with backgrounds in education, psychology, industry, and engineering. It offers a range of optional educational experiences using diverse pedagogy. The learning experiences include academic courses, co-curricular workshop programs, departmental working groups, guest lectures in courses and multiple stand-alone seminars, workshops, panels, and other activities. In addition to the instructional and experiential elements, the program also uses recognition, certificates, awards, and scholarships to increase the value placed on leadership, and to thereby inspire leadership involvement and initiatives throughout the Engineering Faculty.

LOT has grown tremendously since its inception. LOT began in the Department of Chemical Engineering and Applied Chemistry at the University of Toronto in 2002. With Provostial funding awarded in 2006, LOT expanded into a Faculty-wide program with a clear mandate:

1. To strengthen the experience of engineering students by providing coherent, structured and intentional learning opportunities to enhance their leadership development.
2. To enhance the connection between the field of engineering, with all its technical, analytical and problem solving capability, and society, enabling graduates to contribute more fully as engineers and citizens.

In 2007-2008, 142 events were offered with 4000 student contacts. Last year in 2008-2009, participation doubled with over 8,000 student contacts made through 199 events. This year, LOT made a total of 7,646 student contacts through 251 events. Central to its mission, the program is working to empower the leadership potential of students and thereby the engineering profession as a whole.



Vision and Mission

Vision

We believe that the engineering profession can achieve greater positive impact on society by incorporating leadership development into engineering education. Hence, our vision is for:

An engineering education that is a lifelong foundation for transformational leaders and outstanding citizens.

Underlying this vision are the beliefs that:

- Leadership can be learned and therefore can be taught;
- Everyone shares in the responsibility for leadership; and
- Leadership education will empower and multiply the positive impact of engineers.

LOT aims to promote the development of exemplary citizenship by providing students with a foundation that will inspire and guide them throughout their lives. Further, the synergy between engineering and leadership is necessary to bring about social change through both technology and people.

Mission

Accordingly, our mission is to design, develop, implement, and evaluate the concepts, strategies, and components of a world-class engineering leadership development program that:

- Enables students to gain knowledge, skills, and experience that increase their ability and motivation to effect positive change and benefit society;
- Provides students with opportunities to develop their leadership ability by observing, experiencing and reflecting on the leadership process within their groups and communities;
- Provides extracurricular, co-curricular and curricular components for students throughout their undergraduate and graduate experience;
- Engages faculty, staff, and alumni so as to promote a leadership culture across the Faculty and beyond;

So that it promotes development of exemplary local, national, and global citizenship and provides a foundation that will inspire and guide students throughout their lifetimes.

To review our beliefs and values, please refer to Appendix A.

Program Structure and Organization

The Engineering Leaders of Tomorrow Program co-leaders are:

- **Professor Greg Evans**, Professor in the Department of Chemical Engineering and Applied Science, Director of the Southern Ontario Centre for Atmospheric Aerosol Research
- **Professor Doug Reeve**, Professor and Chair of the Department of Chemical Engineering and Applied Chemistry

The LOT Program staff are:

- **Annie Simpson**, Assistant Director
- **Anitta Satkunarajah**, Student Leadership Development Officer (until December 2009)
- **Deborah Peart**, Leadership Assistant
- **Brian Tran**, Program Assistant (as of February 2010)
- **Estelle Oliva**, Leadership Education Specialist, joins us early in the next reporting period (May 2010)

These individuals comprise the team that plan and administer the program on a daily basis. A number of other individuals made significant contributions to the delivery the program: Leadership Development Professor David Colcleugh taught APS501; Dr. Robin Sacks taught APS1010; Nick Evans and Wayne Stark taught APS1011; Emily Reed contributed to curriculum development and facilitation in 2009; Ellie Avishai facilitated our 'Team Skills' certificate program in winter 2010.

The Office of Student Life is an essential partner in the development of this program. Director Deanne Fisher, Program Coordinator Ian Simmie, and Leadership Development Coordinator Val Cortes provide invaluable leadership resources and on-going support to LOT.

Oversight Committee

The LOT Oversight Committee meets once each term to review our progress and to consult on program development. The Committee is comprised of:

- **Prof. Grant Allen**, Vice-Dean of Undergraduate Studies
- **Lucy Fromowitz**, Assistant Vice-President, Student Life
- **Ian Simmie**, Program Coordinator, Student Life Programs
- **Annie Simpson**, Assistant Director
- **Prof. Greg Evans**, Co-Leader
- **Prof. Doug Reeve**, Co-Leader

Department / Division Steering Committee

Students of the various Departments and Divisions form LOT 'working groups' that plan and coordinate leadership-related events throughout the year. The purpose of the working groups is to give students opportunities to practice leadership while organizing events and building community. They represent their respective Departments/Divisions, while operating under the Leaders of Tomorrow umbrella. This year the following units had active student working groups:

- Chemical Engineering and Applied Chemistry
- Electrical and Computer Engineering
- Engineering Science
- Materials Science and Engineering
- Mechanical and Industrial Engineering
- Leaders of Tomorrow: Graduate



Each working group has an appointed faculty and staff member who provide support and oversight to students (with the exception of Leaders of Tomorrow: Graduate). The Department/Division Steering Committee composed of the LOT program team and the staff and faculty leads, meet twice a year to share updates and best practices. Members of this committee in 2009-2010 can be found in the organizational chart Appendix B.

Core Programming

LOT's core programming is comprised of three sub-programs: curricular, co-curricular, and extra-curricular. Our curricular program consists of structured, academic learning in the form of formal courses, and 'leadership infusion lectures'; our co-curricular program consists of two certificate programs; our extra-curricular program consists of a large variety of stand-alone workshops, seminars, conferences, and other modes of delivery.

Curricular Program

The 2009-2010 academic year marked significant growth for LOT's curricular programming. We introduced two new leadership courses at the graduate level. The first, APS1010: Cognitive and Psychological Foundations of Effective Leadership, was offered in the fall term by Dr. Robin Sacks. The second, APS1011: Concepts and Applications of Authentic Leadership, was offered in the winter term by Wayne Stark and Nick Evans. These two courses, along with APS 501: Leadership and Leading in Groups and Organizations, offered in the fall term by Dr. David Colcleugh, represent LOT's current roster of academic offerings. The launch of the two new courses offers students greater ability to engage with LOT in the ways that most interest them.

Due to the interactive nature of our courses, enrolment is limited to 40. Interested students are asked to apply through our website and express their reasons for wanting to take the course. Students are admitted based on their ability to demonstrate considerable reflection on, and commitment to, leadership development. We hope to be able to offer more students the chance to engage at the curricular level as we expand our offerings.

Furthermore, we continued to deliver and refine our 'Leadership Infusion Lecture Series' for undergraduate students in the Faculty.



APS 501: Leadership and Leading in Groups and Organizations

This course covers topics ranging from self-leadership, to setting strategic direction, to implementing change in the business enterprise. It is relevant to aspiring leaders of small not-for-profit organizations as well as of large high-tech companies. Students gain skills and competencies in 'thinking frameworks' applied to leadership, creating vision and mission statements, understanding leadership character attributes, and engaging in effective teamwork. In collaboration with the LOT Office, this course was designed and taught by Dr. David Colcleugh, former President of DuPont Asia-Pacific and former President, CEO, and Chairman of DuPont Canada. He is a distinguished engineer with over 40 years of leadership experience in industry. APS 501 has been offered to a combined class of graduate and undergraduate students three times since 2007.

APS 1010: Cognitive and Psychological Foundations of Effective Leadership

This course investigates the cognitive and psychological foundations of effective leadership. Students explore current theories driving effective leadership practice including paradigms of leadership, neurophysiological correlates of leadership, and psychodynamic approaches to leadership. Students learn and apply skills including mental modeling, decision-making, teamwork and self-evaluation techniques. The course was designed, and is taught, by Dr. Robin Sacks.

APS 1011: Concepts and Applications of Authentic Leadership

This course has students explore their leadership potential in three modules. The first module teaches students to examine their value system, to identify their aptitudes through self-reflection, and to gain an understanding of their natural approach to working. The second module examines the role of leaders in shaping the work environment and in providing feedback and coaching to others. The final module of the course helps students translate their natural authentic leadership into strategies for change, thereby enabling them to become change agents. The course was designed, and is taught, by Nick Evans and Wayne Stark.

For all course syllabi please see Appendix C.

Measuring Impact of Academic Courses

It is important to us that we understand our impact on student learning. Accordingly, we assessed the feedback provided by our students through formal course evaluations. We are pleased to report that all three of our academic courses were very well received. The table below presents response averages across four key questions along with corresponding averages for the Faculty as a whole.

Question	APS501	APS1010	APS1011	Faculty Average
1. What is your overall rating of the instructor?	6.4	6.7	6.3	5.4
2. What was the value of the overall learning experience?	6.0	6.6	6.0	4.8
3. What is the relevance of this course to your professional development?	6.4	6.7	6.0	5.0
4. What is your level of enthusiasm now that you have completed this course?	6.1	6.7	5.9	4.6

Likert scale of 1=lowest, 7=highest. n=30 for all three courses.

The average responses are well above the Faculty average and are among the highest in the Faculty. In addition to these questions, supplementary questions were introduced in 2009 to better evaluate the learning outcomes specific to leadership. They are summarized in the following table.

Question	APS501	APS1010	APS1011
1. I will be a better leader for having taken this course.	6.2	6.6	6.4
2. This course has increased my motivation to continue to learn to be a better leader.	6.2	6.7	6.4
3. This course has provided me with knowledge that will help me learn to be a better leader.	6.4	6.7	6.3
4. This course has increased my understanding of the nature of leadership.	6.3	6.6	6.3
5. This course has increased my understanding of myself as a leader.	5.9	6.7	6.3
6. This course has enhanced my ability to contribute as an engineer.	5.5	6.3	5.9

Likert scale of 1=lowest, 7=highest. n=30 for all three courses.

We are encouraged by the excellent feedback gathered by these supplementary questions. These responses indicate that all students who responded felt they agreed or highly agreed with the above statements. This corroborates our view that these courses were not only well delivered, but were also effective insofar as they have engaged students on a number of leadership dimensions.

Leadership Infusion Lecture Series

This is the second year that LOT has delivered its leadership infusion lectures (previously known as ‘curriculum infusion’). These lectures take place as one-hour guest-lectures within regularly scheduled undergraduate courses. This year, five lecture topics were covered. This year’s lectures were delivered by Prof. Greg Evans, Annie Simpson, Dr. Robin Sacks, and graduate students Erin Kim, Pawel Kosicki, Walter Vulej, and Paul Kishimoto. The following table presents their topics and learning objectives.

Lecture Topic	After attending this lecture, students will be able to:
Engineering Leadership	<ul style="list-style-type: none"> • Describe how leadership relates to engineering. • Use a framework to describe the nature of leadership. • Describe how leadership is related to self-awareness. • State their values, talents and passions. • Identify their leadership style.
Developing Your Potential	<ul style="list-style-type: none"> • Use self-awareness to develop a positive cycle between their choices and activities. • Use a framework to describe Emotional Quotient (EQ). • Identify an EQ competency they want to develop and habits to help do that. • Determine if they are an introvert or extrovert. • Articulate a framework for developing leadership potential.
Leadership and Teamwork	<ul style="list-style-type: none"> • Describe the stages of team development. • Use a framework to describe how their leadership type may affect group function. • Explain the roles of trust and conflict in effective teamwork.
Leadership and Vision	<ul style="list-style-type: none"> • Describe how leadership links to vision. • Critically analyze a vision statement. • Create a compelling vision statement. • Use vision as a starting point from which to implement change.
Leadership and Citizenship	<ul style="list-style-type: none"> • Describe elements of citizenship and global citizenship. • Connect citizenship to the Social Change Model of Leadership Development. • Use a framework to envision putting inspiration into action.

The lectures’ main objective was to provide all engineering students with a basic understanding and awareness of leadership concepts. In addition, they also aimed to inspire a number of students to engage in more intentional leadership development whether through LOT or elsewhere.

In 2009-2010, 17 lectures were delivered, reaching 2,134 engineering students from first, second, and third year. For a schedule of these lectures, please refer to Appendix D.

Chart A: Proportion of students reached by year of study

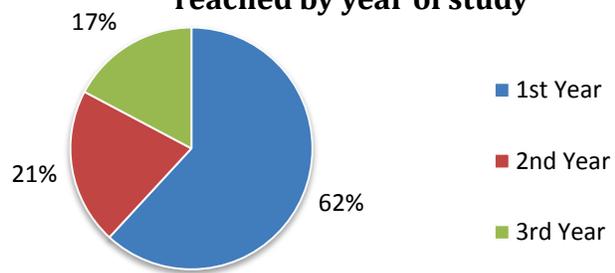
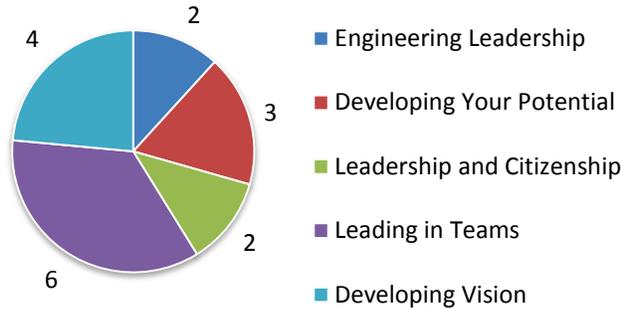


Chart A shows the proportion of students reached this year by study cohort. Consonant with our goal of fostering a sustained culture of leadership excellence in the Faculty, we are pleased to have reached a large number of first year students through this series. Chart B below shows the number of times each lecture topic was delivered this year.

Chart B: Number of times lecture topics were delivered



Measuring Impact

At the end of each leadership infusion lecture, students are asked to complete a brief and anonymous feedback form. We asked students seven questions for which they were to indicate their responses on a scale from one to ten, in ascending order of agreement with a given statement. This year we collected 699 surveys.

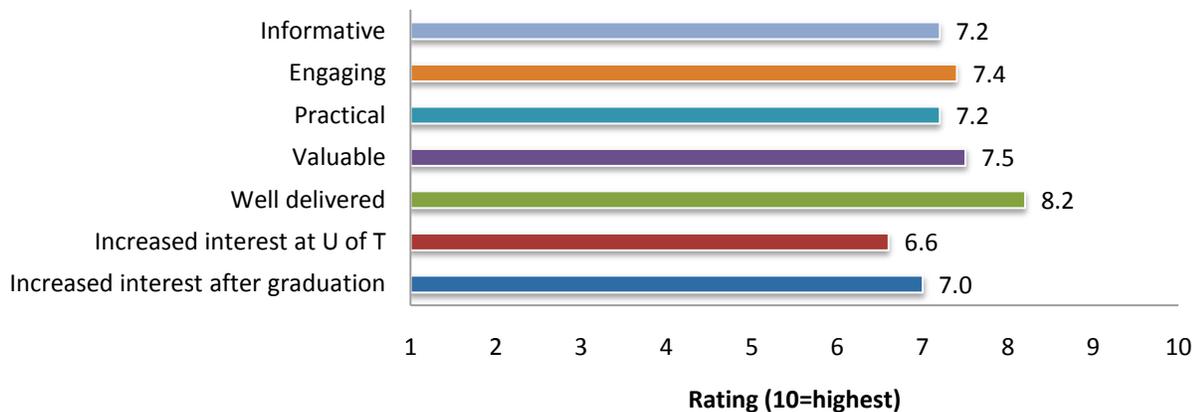
The following table presents the questions asked in this survey, the average response for each question, and also the percentage of respondents who rated the session at least 7/10, which we interpret to be the proportion of students who felt that the session was at least ‘good’ on the following dimensions.

question, and also the percentage of respondents who rated the session at least 7/10, which we interpret to be the proportion of students who felt that the session was at least ‘good’ on the following dimensions.

Overall, to what extent was this session...	Average (/10)	%n ≥ 7/10
Informative?	7.2	69%
Engaging?	7.4	74%
Practical?	7.2	71%
Valuable?	7.5	73%
Well delivered?	8.2	89%
Has this session increased your interest in learning about leadership...		
At U of T?	6.6	57%
After graduation?	7.0	67%

Likert scale of 1=highly disagree, 10=highly agree. n=699

Infusion Lecture Survey Response Average



For a detailed look at our survey data as a whole, please refer to Appendix D for schedules, histograms, and analysis of variance between cohorts and topics.

Co-Curricular Certificates

In fall 2008 LOT launched its first certificate program, 'Team Skills', in order to fulfill a need for more in-depth co-curricular leadership programming. The success of this program demonstrated strong demand for highly experiential learning offered outside of regular class hours. All three times that 'Team Skills' has been offered the number of student applicants has exceeded the number of available spots. This year, we expanded our co-curricular offerings to two certificate programs, Certificate One: *Team Skills*, and Certificate Two: *Self-Leadership: Leading from the Inside Out*. Both consist of five two-hour workshops held over five weeks.

Certificate Two: Leading from the Inside Out (Fall 2009)

Building on the success of the Team Skills Certificate Program launched in Fall 2008 we developed a second certificate 'Leading from the Inside Out.'

The second certificate uses arts-based learning to explore four foundational competencies inherent to self-leadership: self-awareness, personal congruence, vision, and comfort with taking risks. Students engage in theatre games, discuss the Jungian concept of personal shadow, are led through guided visualization and create a vision-piece which they present to their peers at the final session. The learning is highly interactive and experiential. Throughout the certificate program students are challenged to take risks and to share their inner experience with the group. This is used to build strong and authentic community as well as to encourage confidence building. As with the first certificate there is great emphasis placed on reflection. At the end of each session students are given thought-provoking journaling questions and they are asked to share their responses with others. By offering opportunities for reflection, both individual and group, students develop the tools for ongoing reflection they will need to continue developing themselves as leaders.

We are excited to announce that this new certificate program was met with overwhelmingly positive feedback. The chart below lists questions asked of students and the average percent change in responses after having completed the second certificate program. As with Certificate One, students in Certificate Two rated their beliefs about their own competencies higher across all questions.

Measuring impact through survey data & written feedback

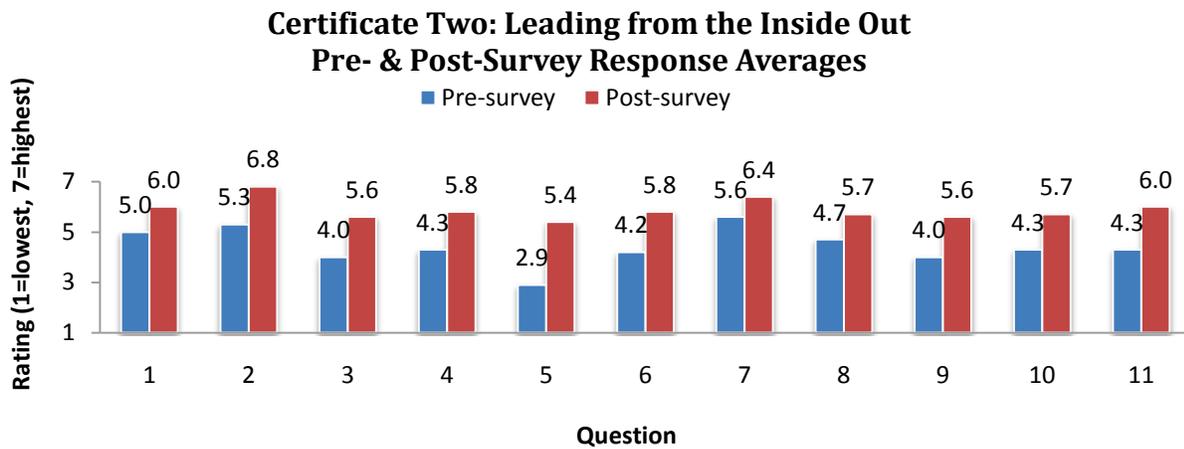
To help us assess the impact of our certificate programs and measure student learning, we delivered one voluntary survey for participants to complete before the start of each program (pre-survey), and after (post-survey). Each survey asked the same set of questions, enabling us to observe changes in students' perceived abilities and understanding of key concepts. We are also able to assess whether we have successfully empowered students to learn the intended outcomes of the program.

We have tested the data for statistical significance with a 95% confidence level to ensure that changes in responses observed in pre- and post-surveys were great enough to represent real changes.

Our surveys also asked open-ended questions to obtain qualitative feedback. Students provided very positive feedback for both Certificates One and Two, and we have provided a sample of the most insightful responses for your review.

The positive quantitative and qualitative information we have gathered indicate that our pedagogical goals were met and that students were positively impacted.

No.	Certificate Two Survey Questions	% change before and after
1	I have the skills to set personal goals that help me develop as a leader.	+20%
2	I believe that risk is an important characteristic that leaders display.	+28%
3	I have the confidence to use calculated risk in my life.	+40%
4	I am aware of the different ways of looking at power and how it affects personal leadership.	+35%
5	I am familiar with the qualities of my positive and negative Shadow and how it connects with leadership.	+86%
6	I have a clear sense of my leadership strengths and areas for improvement.	+38%
7	I know what my values are and I make choices that align with them.	+14%
8	When I listen to others, I am skilled identifying their values.	+21%
9	I have a clear vision of how I can use my greatest potential for a fulfilling future.	+40%
10	I am confident articulating my vision to others.	+33%
11	I am skilled at critically reflecting on my development as a leader.	+40%



Pre-survey n=21, Post-survey n=23

The graph above captures how students responded, on average, to these questions before and after having completed the program. The changes in sample means across all questions proved to be statistically significant ($\alpha=0.05$). Please refer to Appendix E for greater detail on our analysis.

Testimonials

In addition to these eleven questions, the survey also asked ‘How has this certificate/LOT helped you to develop as a leader?’ We have transcribed selected feedback in this section.



‘It has given me the opportunity to critically evaluate what skills, values and views I have (and which ones I don’t have) that contribute to effective leadership. It has also given me the chance to practice risk-taking in a comfortable environment to develop the confidence to demonstrate it outside of my comfort zone.’

‘It has helped me realize what I value most, and shown me that there is the potential within me to be a leader—I just have to take the risk and have courage to expose it.’

‘This certificate helped me open up more of [my] inner self and value the leadership [education] I have gone through as it [has] made a better future.’

‘It taught me that I need to be confident with myself before I can lead others.’

‘This program has helped identify areas that I was not comfortable with. I felt that risk-taking, values and empowerment were items that we touched upon that collectively form a direction for me to develop into a positive leader in our community.’

‘[It] helped me consider my values and base my choices around them.’

‘This certificate has introduced me to a new definition of leader, one that can be attained, envisioned and articulated. I have learned much about leadership and how it applies to my life.’

Certificate One: Team Skills (Winter 2010)

Due to strong demand, the successful *Team Skills* module was offered in the winter term for the third time. We recognize that professional engineers often work in multi-disciplinary teams and that team settings are a natural laboratory for learning leadership.

Certificate One also involves five sessions. These sessions are: (1) *Discovering Your Leadership Style*, (2) *Transforming Conflict*, (3) *Facilitating Groups*, (4) *Diversity and Equity in Teams*, and (5) *Reflection*. As a result of participating, students learn about their personality styles and how this translates into leadership strengths. They also learn about alternative leadership styles and how to adapt their style when working with others who have different values and approaches. They practice conflict resolution techniques, dialogue processes, and acquire tools to address challenging group dynamics. Lastly they examine and reflect on their own social identities and how their cultural, gender, economic and sexual identities impact their experience and their leadership. Infused throughout the program is an emphasis on self-reflection. For example, following an interactive role-play students are given the opportunity to reflect, through guided journaling, on their

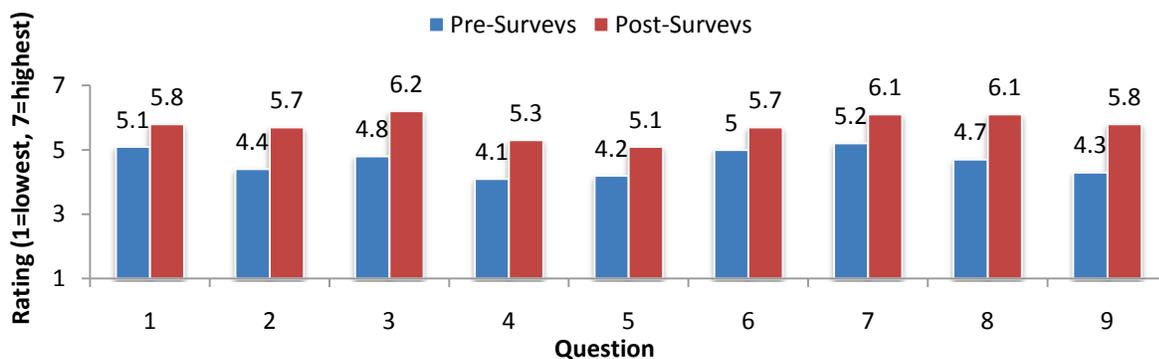
responses, behaviours, and assumptions. This integration of self-reflection is meant to fortify insights gained and support students to respond intentionally to future team situations. In order to receive a certificate students submit a final paper, a culmination of the journaling done throughout the program.

The chart below lists questions asked of students and the percent change in responses after having completed the certificate program. The results are highly encouraging. Students rated their own skills more highly after the program across all questions.

No.	Certificate One Survey Questions	% change before and after
1	I believe in myself as a leader.	+14%
2	I understand the strengths of my personal leadership style and I recognize the strengths of other styles.	+30%
3	When working with others who have a different style, I know how to adapt in order to work more effectively.	+29%
4	I'm pretty good at figuring out what other people are thinking, even if they don't say it out loud.	+29%
5	When someone challenges me or my ideas, it does not tend to get in the way.	+21%
6	I feel confident in my ability to resolve and engage in conflict.	+14%
7	When part of a group I make it a priority to make sure that others feel heard.	+17%
8	I am confident in my ability to facilitate discussions in teams and groups.	+30%
9	I know how to respond when, as a facilitator, I am challenged by difficult group members.	+35%

The graph below captures how students responded, on average, to these questions before and after having completed the program.

Team Skills: Pre- & Post-Survey Response Averages



Pre-survey n=25, Post-survey n=19

The changes in sample means across all questions proved to be statistically significant ($\alpha=0.05$). Please refer to Appendix E for greater detail on our analysis.

Testimonials

In addition to these nine questions, the survey also asked ‘How do you hope to apply what you will learn here?’ We have transcribed selected feedback in this section.

‘I learned some great ways to resolve or deal with conflicts of opinion during team work which I hope to apply during my future leadership work. I developed some really good active listening skills during the sessions that will personally help me in the future, not just as a leader but [in] many other roles.’

‘I hope to use these skills and apply them to not only my engineering and military career, but also in dealing with people on a daily basis. I feel more confident with my interpersonal skills and I gained a lot from this course.’

‘I hope to be part/create more efficient teams for projects and groups. I would also like to apply my knowledge to my [day-to-day] life to have better interactions with everyone.’

‘I hope I can use what I learn here in my design team this semester. More importantly, I would like to use these skills in my future career as team leader/project manager.’



Extra-Curricular Programming

Highlight of Events

Over the past year, the LOT office has directly organized and collaborated on a large number of events, making a total of 4,287 student contacts through 88 events and formal meetings. Together with the activities conducted by the LOT Department and Division working groups, the program generated a total of 7,646 student contacts this year through 251 events. This represents a 31% increase in the number of events delivered compared to the previous year. These events provide support, resources, and training to students within the context of incorporating leadership development into the student experience.

We provide a selection of these events below. We encourage you to see Appendix F for a complete list of this year’s activities.

Date	Name and Description
June 5 -7, 2009	<p>New U Leadership Conference</p> <p>This conference was hosted by LOT in collaboration with the Engineering Society and the Office of Student Life. Students from various student unions and councils from all three U of T campuses had a unique opportunity to network, learn, and enhance their leadership skills. The conference included numerous speakers, discussions, and concurrent sessions that helped over 100 students connect with their constituents, stakeholders, and other student organizations.</p>
September 9, 2009	<p>First Year Orientation: Faculty Day</p> <p>LOT took part in welcoming new students to the Faculty. In total, three sessions were delivered, including one event that focused on women’s leadership.</p>
November 14, 2009	<p>Leadership Training Day</p> <p>The day included two interactive workshops and an afternoon ‘Dragon’s Den’ activity. The Second City Improv company facilitated a workshop entitled ‘Getting Your Message Across’ and Ellie Avishai from the Rotman School of Management led a workshop on leadership styles and team dynamics. In the afternoon, students were given a case study and were tasked with proposing a solution to one of three global issues and incorporating lessons from the morning into a creative presentation.</p>
January 20, 2010	<p>‘Engineering the City’ with Mayor David Miller</p> <p>LOT invited Toronto Mayor David Miller to discuss his vision of ‘Engineering the City’ and how engineers can play a pivotal role in managing the urban environment within the context of climate change. LOT student Jason Sukhram played a pivotal role in organizing this event.</p>
February 1, 2010	<p>‘Leadership Through the Arts’ with Annie Simpson</p> <p>Annie Simpson facilitated a workshop for LOT:G that involved sculpture and visualization exercises. Through these activities students were led to identify their deepest values and to take the necessary steps to live in alignment with them.</p>
February 10, 2010	<p>Special Guest Seminar with Prof. Ruben Gaztambide-Fernandez, OISE</p> <p>Professor Ruben Gaztambide-Fernandez spoke to the Cross-Faculty Working Group and other highly engaged students. He spoke about exclusive and inclusive leadership and how education systems tend to reproduce relations of societal inequality.</p>
March 13, 2010	<p>‘Leading in a Diverse World’ with Shakil Choudhury</p> <p>This workshop challenged students to probe their implicit biases and stereotypes. In the context of a multicultural society, participants discussed the challenges faced by those who experience prejudice in their lives, and how effective leadership requires leaders who can leverage diversity.</p>
March 24, 2010	<p>‘The Courage to Lead’ with Annie Simpson</p> <p>This highly experiential workshop delved deep into participants’ ideas about themselves, and the limitations they place on their own potentiality. This session explored the essence of courage and how it enables leadership.</p>



Supporting Student Clubs

LOT staff has worked closely with a number of student clubs. We have for the last three years provided workshops, team-building sessions, and advice to student leaders. Our work with student club leaders serves to enhance the leadership culture across the Faculty and to encourage more effective student organizations. This year, we engaged with:

- Engineers Without Borders (EWB), to help their executive team clarify the chapter's vision and values.
- Women Empowered in Engineering (WEE), to help promote and guide this group in effectively reaching female students in the Faculty.
- TISCUT, a group of chemical engineering graduate students, to provide a team-building session,
- Women in Science and Engineering (WISE), to collaborate with event planning.
- LOT: G working group, to advise, support, and offer two sessions.

In addition to these groups, we have helped a number of other clubs who requested support in promoting leadership-related events.

In the fall LOT offered, in collaboration with the Engineering Society, three interactive sessions for club leaders to support their transition into leadership by offering skill-building sessions. These sessions included: (1) 'Facilitating Your Club's Meetings', (2) 'Event Planning', and (3) 'Creating a Culture of Feedback.' We are in the midst of engaging club leaders for programming in the coming year.

Cross-Faculty Working Group

The LOT Cross-Faculty Student Working Group, facilitated by Annie Simpson, forms an important part of our extra-curricular programming. The Group is comprised of student representatives from each of the Department and Division working groups. It serves as a forum for discussion on leadership topics and as a resource to organize leadership-related events that are open to all engineering students. The Cross-Faculty Student Working Group was instrumental to organizing many events this year, including 'Engineering the City' with Mayor David Miller, 'Leading in a Diverse World' with Shakil Choudhury, and 'Leadership Training Day'.

Department and Division Programs

To create a culture of leadership and a strong sense of community for students, faculty, and staff, working groups have formed in six Departments and Divisions across the Faculty. The intention of the department programs is to give students opportunities to practice their leadership. With guidance from an appointed faculty and staff person students generate ideas for events and together turn those ideas into reality. Through this vehicle students build community, engage with alumni, and gain hands-on leadership experience by taking their ideas and turning them into action. We summarize the groups' activities in the following sections. Please refer to Appendix G for complete schedules of events and meetings for each working group.

Chemical Engineering and Applied Chemistry (CHEM LOT)

LOT CHEM had a very successful year in 2009-2010. For the third year in a row, Research Days has proven to be a popular draw among Chemical Engineering students. Faculty members of the Department were also very visible in the program this year. Many showed their support by participating in Lab Tours, an 'Ace the Interview' event, Research Days, and a session entitled 'Global Engineering 4 Dummies.' Students who were

not part of the working group, but who attended CHEM LOT events, have shown an interest in participating in next year's working group.

This past summer, CHEM LOT held a very successful 'Chemical Engineering LOT Summer Program'. This program offers an intensive leadership development experience for summer research students and consists of a number of workshops, events, and activities conducted throughout the summer months. Some topics of discussion included 'Leading Transformational Change', 'Managing Your Career', 'Engineering and Public Policy', and 'Facilitating Groups'. Students also took part in a group excursion to Lake Ridge and a Sanofi Plant tour. For details on the 2009 summer schedule, please see Appendix H.

Material Science and Engineering (MSE LOT)

In the 2009/2010 term, the MSE Leaders of Tomorrow working group had a vision of inspiring individuals with the idea of a 'Global Engineer'. The working group's approach was to break down their vision into two facets: 'Professionalism and Soft Skills' and 'Community Responsibility'. Each facet was considered as a theme of focus for the two semesters of the year. During the first semester, the working group facilitated two events: a Professional Education Year (PEY) Panel and a Team Dynamics session. During the second semester, the MSE working group mobilized the broader MSE student body to raise donations for the Canadian Red Cross toward earthquake relief efforts in Haiti. The two themes 'Professionalism and Soft Skills' and 'Community Responsibility' were also presented as unique newsletters which were made available to the MSE community at the beginning of the respective semesters.

Electrical and Computer Engineering (ECE LOT)

This year the ECE LOT group held a number of events. It helped to organize the successful Engineering Entrepreneurship Series that brought prominent speakers to U of T. It also held seminars on time management, networking, and exam study tips. ECE LOT also participated in the earthquake relief fundraiser for Haiti along with MSE LOT.

Mechanical and Industrial Engineering (MIE LOT)

This year MIE LOT organized a workshop on Emotional Intelligence and Leadership, facilitated by Annie Simpson. The group also took part in a Habitat for Humanity Build, as well as volunteered at Downsview Park planting trees with Evergreen. The working group also held an MIE alumni career panel and contributed to fundraising efforts towards Haiti earthquake relief.

Engineering Science (EngSci LOT)

The EngSci LOT group held two leadership-focused retreats this year, and also organized a debating workshop. They also took part in the organization of an elaborate First Year Orientation Day. The group used their meetings to discuss a number of leadership topics, whereby creating a forum for reflection and growth.

Leaders of Tomorrow: Graduate (LOT:G)

The graduate student chapter of LOT has had a prolific year. It held a number of professional leadership development events including 'Media Relations' with Liam Mitchell, 'How to get your P.Eng' with Manoj Choudhary, and 'Leading the Business Enterprise: A General Framework' with Prof. David Colcleugh. It also organized a three-day workshop series on drive, courage, and vision within the context of leadership, facilitated by Annahid Dashtgard of Anima Leadership and Annie Simpson. The group is also poised to launch the new academic journal, *Engineering Leadership Review* (to be discussed in a later section of this report).

Student Recognition

Awards and Scholarships

It is essential that we formally recognize students who exhibit exceptional talent as leaders. Entry scholarships help us attract students who have demonstrated early aptitude for leadership. One such scholarship, The Colcleugh Family Scholarship, established in 2005, offers \$8,000 per year, for four years, to one incoming student who demonstrates outstanding scholarship, leadership, and volunteerism.

Two Leaders of Tomorrow Awards for in-program students were awarded for the first time in 2005. The Professor James W. Smith and the Class of 5T9 Leaders of Tomorrow Awards are for second and third year students respectively. In March 2010, the Troost Family Leaders of Tomorrow Award for fourth year students was given for the first time. Each award is valued at \$5,000. The selection process for recipients is modeled after that of the Rhodes Scholarship and seeks students 'who have shown the potential to become outstanding leaders', and who 'have the ability to inspire others to action and to excellence'.

We believe that establishing Leaders of Tomorrow Awards in Departments and Divisions across the Faculty is an outstanding way of cultivating leadership potential. The Faculty introduced the Applied Science and Engineering Leadership Award for current students in 2007. Awards valued at \$3,000 were awarded to two exceptional students who had demonstrated leadership through their co-curricular and extracurricular involvement. In May 2008, the Edwards S. Rogers Department of Electrical and Computer Engineering awarded its first Leaders of Tomorrow Award valued at \$5,000.

Annual Appreciation Night

Every year, the LOT office holds a special night of food and fun to acknowledge and celebrate the hard work of all those involved in making our program a success. This year, we held our Annual Appreciation Night on March 31, 2010. In past years this event focused on the achievements of our many student working groups. In 2009-2010 we expanded this evening to also recognize the accomplishments of our certificate program graduates. Students, staff, and faculty spent the evening listening to one another's accomplishments, watching specially-prepared videos and slideshows, and enjoying each other's company. This year's theme was 'pride'—pride in accomplishment, pride in community, and pride in shared experiences.



LOT in the News

This year we were able to grow the program's profile through media exposure. We believe our presence in widely distributed publications is important to our sustained growth as it allows us to showcase our activities and expand our mindshare within U of T and beyond. We present notable examples here. To see reproductions of these articles, please refer to Appendix I.

The Engineering Newsletter: Mayor David Miller and 'Engineering the City'

In January 2010, LOT invited Mayor David Miller to speak to a packed room of students to discuss his vision of Toronto's future. LOT hosted Toronto's Mayor in The Blue Room of the Sanford Fleming Building for a talk on the role engineers can play in improving the urban environment within the context of climate change.

This special talk was one of the year's highlights. We successfully hosted a forum for students to engage with the Mayor, thereby putting us on the radar of Toronto's political leadership and students alike. To mark the moment, *The Engineering Newsletter* featured an article on this event for wide distribution within the Faculty. The article was written by LOT's work-study student Anastasia Shteyn.



Engineering Dimensions: 'Program Offers New View of Engineering Leadership'

Engineering Dimensions, the official magazine of Professional Engineers Ontario, published an article on LOT entitled 'Program Offers New View of Engineering Leadership' in their July/August 2009 issue. The two-page article, written by Michael Mastromatteo, provides us excellent exposure to industry professionals and underscores our relevance not only to students, but also to the profession at large. The magazine is published bimonthly and is distributed to all PEO licensed professional engineers.

The Cannon: Articles by Anastasia Shteyn

It is important to us that students are aware of what LOT does and how they can get involved. This year we have had many LOT-related articles published in *The Cannon*, a student-run and student-oriented engineering magazine. Anastasia Shteyn's work has been instrumental to providing us a vehicle for which students can read about our activities. We would like to highlight just two of her many articles for us this year: (1) the October 2009 issue detailed our fall certificate program, 'Leading from the Inside Out'; (2) the December 2009 issue explored our Leadership Training Day, which took place November 14, and provided a full-day of interactive activities.

LOT Beyond the Faculty

University of Toronto Leadership Educators' Network (ULEAD)

LOT has led the formation of a network of leadership educators consisting of faculty and staff from Applied Science and Engineering, OISE, Rotman School of Management, Physical Education, Medicine, Scarborough Management, Centre for Community Partnerships, and Student Life. Beginning in 2008-2009, we catalyzed a conversation on leadership education at the University. ULead meets two to four times per year to share best practices and to engage in dialogue. ULead's work has resulted in two major outcomes: (1) the conception and launch of the inaugural 'Summer Institute on Leadership Education', organized by the LOT office in partnership with the Office of Teaching Advancement (now 'Centre of Teaching Support and Innovation') and the Office of Student Life, and (2) the incorporation of leadership education as one of the central themes of the 2009 Teaching and Learning Symposium.

Summer Institute on Leadership Education

Leaders of Tomorrow, in partnership with the Office of Student Life programs and the Centre for Teaching Support and Innovation (CTSI), formerly known as the Office of Teaching Advancement, organized the first 'Summer Institute on Leadership Education' in June 2009. The Institute grew out of discussions among members of ULEAD. It offered the opportunity for leadership educators and enthusiasts to come together, to share best practices, and to reflect both on our work with students and on our own development as leaders.

The intensive, full-day event included the morning session entitled 'Cultivating Leadership - Emotional Intelligence Skills of Self-awareness, Empathy and Being Present', facilitated by Annahid Dashtgard of Anima Leadership.

Five presentations on best practices in leadership education were offered in the afternoon:

1. **'Emotionally Intelligent Leadership & Emotionally Intelligent Followership'** by Professor Daniel Cushing, Rotman School of Management.
2. **'Leading from the Inside-Out: A Co-curricular Leadership Certificate Program'** by Annie Simpson, (then) Coordinator of the Leaders of Tomorrow Program, Faculty of Applied Sciences and Engineering.
3. **'From the Classroom to the Community and Back'** by Noah Aiken-Klar, National Director, Pro Bono Students Canada, Faculty of Law.
4. **'Leaders and Empathy: Teaching Students about the Ups and Downs'** by Dr. Joanna Heathcote, Lecturer in Organizational Behavior, Department of Management, UTSC.
5. **'Developing Leadership Identity'** by Ian Simmie, Program Coordinator, and Val Cortes, Leadership Coordinator, Student Life Programs.

To conclude the day we held a moderated panel with a discussion entitled, 'The Impact of Self-awareness, Empathy and Being Present.' Panelists included:

- Bill Blundell, former CEO General Electric Canada
- Tony Dean, former Secretary of the Cabinet, Government of Ontario
- Diana Durek, Senior Advisor, Multi-Health Systems Inc.
- Shakil Choudhury, Senior Partner, Anima Leadership

Teaching and Learning Symposium

One of the central themes of this year's 4th Annual Teaching and Learning Symposium, organized by CTSI, was leadership education. LOT delivered two presentations on October 23, 2009: one highlighted our new Co-Curricular Leadership Certificate, 'Self-Leadership: Leading from the Inside Out', and the other discussed our Leadership Infusion Lecture Series. The Leaders of Tomorrow: Graduate (LOT: G) working group also presented a poster on the changing culture of engineering brought about by leadership learning and practice. The inclusion of leadership education as a major theme of this conference reflected a growing community of leadership educators, which the LOT program has played a crucial role in fostering.

Multi-Institutional Study of Leadership

The Leaders of Tomorrow Program, in partnership with Student Life Programs, participated in the Multi-Institutional Study of Leadership coordinated by renowned leadership scholar Dr. Susan Komives at the University of Maryland. The University of Toronto is the first Canadian university to take part in this highly regarded study. Four thousand engineering students were surveyed along with 1,500 non-engineering students from New College. The University of Toronto had a 47% response rate, one of the highest among the 103 participating institutions. The study explored the role of higher education in developing leadership capacities with a special focus on specific environmental conditions that foster leadership development. The data from this study will serve as an important benchmark as we continue to expand our reach.

Engineering Leadership Review

The Engineering Leadership Review (ELR) is a newly-launched academic journal spearheaded by Paul Kishimoto and Maygan McGuire, members of the LOT:G committee and graduate students in the Faculty. The journal was born out of the desire by the co-founders to provide deeper engagement in leadership development and learning through a formal outlet for discussion. They felt that the most effective way to have this discussion would be through a scholarly, peer-reviewed journal. ELR is the first of its kind. What started as a project within the graduate chapter of LOT has blossomed into a ground-breaking publication. The journal's vision is: 'a culture of active discussion of leadership development and practice as an integral part of the engineering identity'.

ELR's first issue was published in April 2010. It had a total of eight articles written by eighteen writers, four of whom were engineering professors. All articles have been double-blind peer reviewed by reviewers outside of ELR. Moving forward, the leadership committee plans to expand its Editorial Board, pool of authors, and reviewers to reflect a truly national publication. ELR is available in print and online. To read the online version, visit: <http://lot.utoronto.ca/elr>.



Looking Forward

Office and Team

This year has marked a significant change for the LOT team. Anitta Satkunarajah left the program in December. Two new team members have recently joined us: Brian Tran, Program Assistant, started in February and Estelle Oliva, Leadership Education Specialist, took her post in May. Recent Engineering Science graduate Mike Klassen joins us for the summer of 2010. Deborah Peart continues her work with us and has contributed greatly to communicating LOT's presence by creating posters and print materials. After an important period of recalibration and transition, the team is ready for the next stage of growth. This expanded team brings excitement and energy looking forward. We are in a stronger position than ever before to deliver new and innovative programming.

Student Club Outreach

To build stronger ties with the Faculty's student clubs we are focusing our efforts this summer on better understanding the needs of club leaders and are designing an approach to engage and support their growth as leaders. We want to identify and address the challenges of new and emerging student leaders so that we can offer the most helpful, timely, and resonant support. Our goal is to have club leaders engage in discussion with their executive teams about their group's vision, values, and objectives in order to support planning that serves their ultimate aims. For engineering-focused design team clubs that focus on a shared project all year, such as Solar Car and Formula SAE Racing, we see an opportunity to encourage deeper thought on team process and communications. Lastly we plan to offer time, space, and guided activities to facilitate personal reflection among club leaders.

After an initial phase of interviews where we are assessing the particular needs of club leaders, we plan to hold reflection and skill building sessions in July and August and then maintain connection with student club leaders throughout the year. A second intention for the year ahead is to reach out to engineering design clubs more consciously, as many of the clubs that we have worked with in the past have a more direct social mission.

Broadening Online Presence

As part of our growth strategy, we want to ensure that our communications with our students remain informative, timely, and relevant. To this end, we are currently redeveloping our website to reflect not only the program's growing profile on campus and beyond, but also the sheer scope of our activities and liveliness. This new website will serve as a more effective communications tool in its organization of information as well as its aesthetic sophistication. Our goal is to launch this new website for the new academic year in September 2010. It will be an invaluable resource for students currently involved in LOT, as well as to those who wish to learn more about us.

While an expanded and improved website will be crucial to our broadening communications strategy, we are also examining ways to stay connected to students via social media. We currently have an active group on Facebook called 'U of T Leaders of Tomorrow' that we use as a tool to promote events and provide updates to our members. Moving forward, we want to grow our membership by continuing to make the Facebook group not only a source of information, but have it also be a space for discussion. The growth of our team means that more resources can be devoted to staying abreast with technological developments that might facilitate information dissemination and the sharing of ideas.

Summer Institute 2010

LOT is currently planning this year's Summer Institute with a focused theme, 'Coaching: a Methodology to Enhance Research, Teaching and Student Life.' This full-day intensive event, offered by Nick Evans and Wayne Stark, will aim to equip Research Team Leaders with coaching skills to apply to their work with graduate students and post-doctoral fellows, Course Instructors with well-studied coaching models to integrate into their teaching, and Student Life Professionals with a roster of tools to support student groups. It will take place June 9, 2010 at Hart House.

Task Force on Engineering Leadership Education

The year's most significant development was the formation of the 'Task Force on Engineering Leadership Education'. Dean Cristina Amon established the Task Force in October 2009 with the following mandate:

1. To review progress of the development of engineering leadership education at U of T.
2. To review and report on leadership education in engineering at other universities.
3. To recommend structures, processes, and models for advancing engineering leadership education at UofT including: curricular, co-curricular, extracurricular activities, and research.
4. To create a vision for engineering leadership that reaches engineering schools and the engineering profession across the country.

The Task Force reviewed advances made by the LOT program and proposed strategies for its future development. Task Force members met thirteen times over the course of the academic year, conducted five focus groups with undergraduate and graduate students, held information interviews with six prominent universities in the United States and Canada, and engaged with stakeholders in the Faculty.

Recommendations

The Task Force recommends the creation of the 'Institute for Leadership Education in Engineering', with the acronym 'ILead'. The academic mission of ILead is to be at the leading edge of pedagogy for engineering leadership education (1) in the development of theory and (2) in execution of programming. ILead will undertake formal research, publish scholarly articles, participate in academic fora, and evaluate progress in leadership development programming at multiple levels. LOT will operate under the umbrella of the Institute, focusing its activities on co-curricular and extra-curricular leadership development. Please see Appendix J for an excerpt from the Task Force Final Report.

Faculty Council Approval

In May 2010, Faculty Council voted by special motion in favour of the proposal to create ILead. This gives us formal consent to move forward with the Task Force's recommendations. Looking forward, the year ahead will be a time of rapid development as the Institute takes shape and LOT continues to grow within the Institute.

Task Force Members:

- Prof. Doug Reeve (Chair)
- Prof. Phil Byer
- Prof. Bryan Karney
- Prof. David Colcleugh, Leadership Development Professor
- Lisa Romkey, Engineering Science Lecturer
- Annie Simpson, Assistant Director, LOT
- George Roter, Co-President of Engineers Without Borders (Canada)
- Ian Simmie, Student Life Program Coordinator
- Maygan McGuire, PhD Candidate
- Angela Tran, PhD Candidate
- Shahed Al-Haque, undergraduate student
- Chris Langan, undergraduate student

The Institute in Context

The creation of ILead will provide LOT with greater resources to support and sustain its rapid growth. Leadership development in engineering schools at home and abroad is surging ahead, propelled by student demand, societal need, and the recognition that the engineering profession can—and should—play a greater role in addressing the many challenges that confront our global society.

This new Institute will be the first of its kind in Canada and will position our leadership development program among those of our peer universities abroad, particularly the highly regarded engineering schools of the United States. Establishing ILead will enable us to become the Canadian focal point of engineering leadership education for students, researchers, and practitioners. It will do so by providing the organizational and intellectual resources necessary to fulfill its ambitious mandate. LOT's own vision to create *an engineering education that is a lifelong foundation for transformational leaders and outstanding citizens* will be thrust forward by the Institute's creation. Great opportunities lie ahead.

Closing remarks

We will remember the 2009-2010 year as a watershed in our history. This year we have offered more events, more academic courses, more certificate programs, and more scholarships and awards than ever before. This year we have also received more funding than ever before. The Leaders of Tomorrow team would like to offer our deepest gratitude to the Troost family for their generous gift to our program. Their investment has already paid dividends to our students, by allowing us to encourage and support them to be the most confident, capable, and engaged global citizens they can be.

LOT aspires to continue its remarkable growth. Propelled by the positive response we have received, we will continue to expand our reach and deepen our impact.

There is untapped potential within the engineering profession. Our goal is to realize this enormous potential by transforming the traditional educational model of engineering students to synthesize the two poles of technical excellence and leadership capacity. There is much to do, but this year marks a great leap forward.

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Appendix

To view or download the Appendix, please visit LOT's website at: www.lot.engineering.utoronto.ca.

- A. Program Vision, Mission, Beliefs, and Values
- B. Organizational Chart
- C. Course Syllabi for APS501, APS1010, and APS1011
- D. Infusion Lecture Schedule and Survey Analysis
- E. Co-Curricular Certificate Program Survey Analysis
- F. LOT Faculty Program Events, Dates, and Participation
- G. Department & Division Working Group Events, Dates, and Participation
- H. Chemical Engineering Summer Program Schedule
- I. *Engineering Dimensions* Article by D. Mastromatteo, *The Engineering Newsletter* Article by A. Shteyn, and *The Cannon* Articles by Anastasia Shteyn
- J. *Summary and Recommendation* Section from the Final Report of the Task Force on Engineering Leadership Education