

Appendix A: Program Vision, Mission, Values, and Beliefs



Vision

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

Mission

To design, develop, implement, and evaluate the concepts, strategies, and components of a world-class engineering student 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 extra-curricular, 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.

Program Beliefs

- The full potential of our graduates to contribute to society is not being realized.
- The full potential of our students, staff and faculty to contribute while at university is not being realized. This represents a substantial untapped resource for our Faculty.
- The role of the Engineering profession in North America must and is evolving.
- Leadership potential/capacity can be learnt and therefore it can be taught.
- Improving their leadership potential will serve our graduates well throughout their professional and personal lives.
- Offering a leadership program will help attract students with an interest in leadership and this self-perpetuating cycle will result in stronger graduates.
- Students who are more engaged will have a better university experience; students who feel they are part of a community will be more engaged. Hence we need to help students to learn how to build communities.
- Engineers with significant leadership skills and attributes contribute more societal value than those without.
- Student engineers exposed to a disciplined, structured learning process in leadership skills/behaviours are more productive contributors to enhanced societal value.
- Today some student engineers gain valuable enhanced leadership skills/behaviours through self-study, volunteering and participating in extracurricular activities and mentoring experiences.
- A structured leadership development component to the student engineer experience will be an

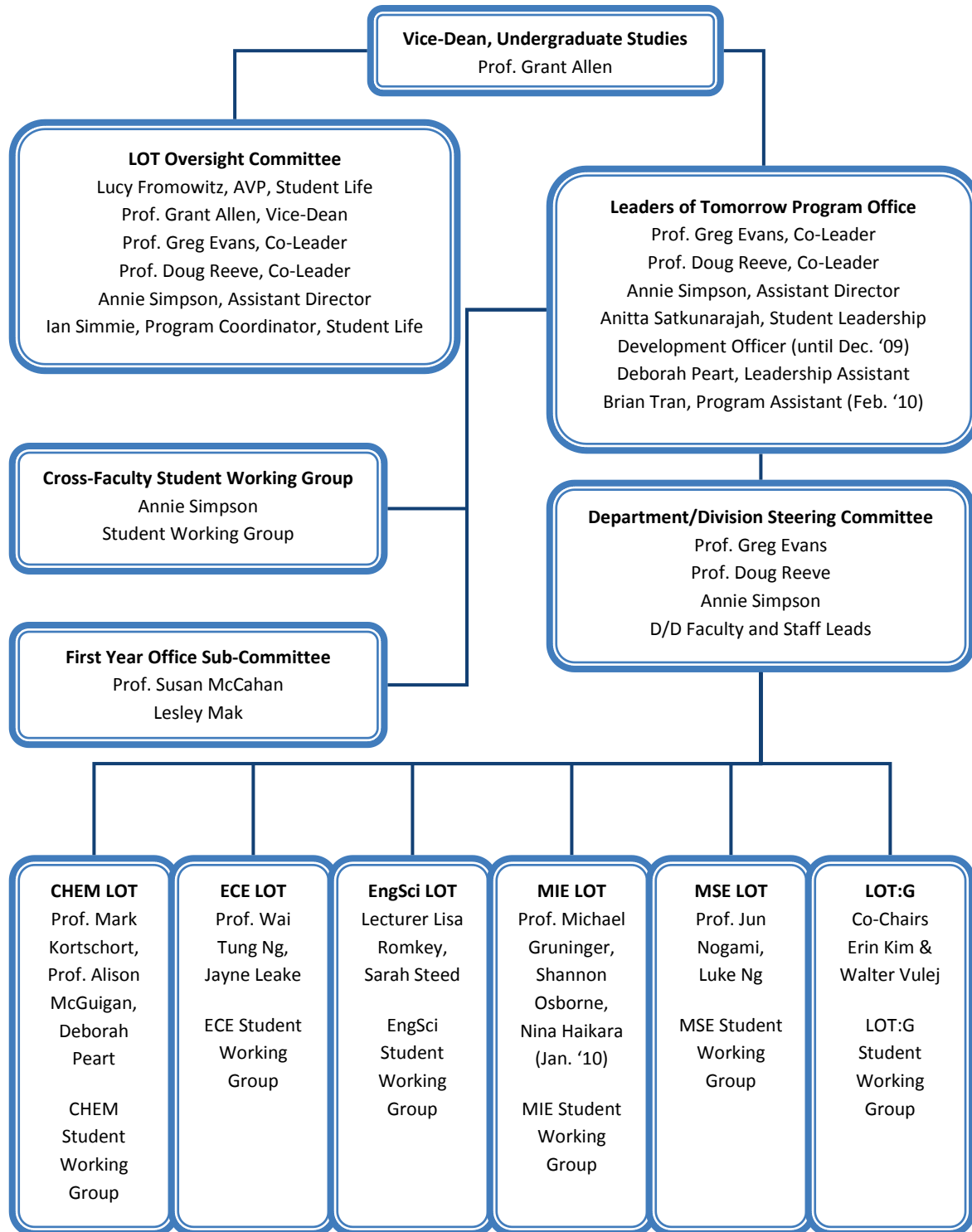
important distinguishing feature for UofT.

- Many student engineers do not appreciate that enhance leadership skills/behaviour will increase their worth to society.

Program Values

- Service: Service to society is a core value of Engineering
- Integrity: Personal and professional integrity is a core value of Engineering
- Social responsibility: responsible use of technology is a core value of Engineering
- Teamwork: Teamwork is a core competency of Engineering
- Structure: Organization (creation of infrastructure) is a core competency of Engineering
- Excellence: is a core value of the University
- Diversity: Recognizing the benefits or diverse views and backgrounds is a core value of the University
- Knowledge: creation and preservation of knowledge is a core value of the University

Appendix B: Organizational Chart



Appendix C: Course Syllabi

APS 501: Leadership and Leading for Groups and Organizations

This course reflects the Faculty's commitment to promoting the development of leadership skills and attributes in engineering students. The content covers a wide range of topics from self-leadership to setting strategic direction to implementing change in an enterprise. The concepts presented will be useful for aspiring leaders of large and small organizations and both profit and not-for-profit organizations. Students will gain skills and competencies in thinking frameworks applied to leadership, creation of vision and mission statements, understanding leadership character attributes, and effective teamwork, among others.

The Chief Instructor is Professor David Colcleugh, former President of the DuPont Company both in Canada and in Asia-Pacific. The course will draw upon his extensive leadership experience various leadership theories and practices.

The course will consist of lectures and discussion groups, in-class discussions and exercises, as well as weekly written assignments, a group project and a final paper.

Chief Instructor:

Professor David Colcleugh, Faculty of Applied Science and Engineering

Instructor and Course Coordinator:

Professor Doug Reeve, Chemical Engineering and Applied Chemistry

doug.reeve@utoronto.ca

Breakout Session Coordinator:

Annie Simpson, Faculty Leadership Development Office

annie.simpson@utoronto.ca

Registration Assistant:

Deborah Peart:

deborah.peart@utoronto.ca

phone: 416 978 6133

Teaching Assistants:

Angela Tran, Chief TA

angela.tran@utoronto.ca

Maygan McGuire

m.mcguire@utoronto.ca

Course Website:

Blackboard

Instructor Availability:

Chief Instructor - by appointment by email. Mondays 8:00 a.m.-12noon (appointment must be made no later than Friday of the preceding week)

Marking Scheme:

Participation and Attendance: 15%

Reflection Questions: 30%

Final Paper: 25%

Group Interview Project: 30%

Required Reading:

Course readings and reflection questions for each week will be posted on the course website.

Late Assignment Policy:

The Group Interview Project and Final Paper will be accepted up to one week after the deadline. Any assignments handed in during this week will have 10% per day deducted from the mark. Responses to weekly reflection questions are due at the beginning of each lecture only and are not accepted beyond this time.

Requesting Extensions:

Please approach the Instructor in advance of the deadline if extensions are needed due to situations such as family emergencies, illness, and other situations out of your control.

Students with Special Needs:

Please approach the Instructor to discuss.

Outline:

Please note that the [Schedule for APS 501H1F](#) contains a preliminary outline for the semester. The schedule may shift to account for students' heightened interest in certain topics and other scheduling issues.

Lectures are 6:10-9:00 pm Mondays.

Discussion Groups are 6:10-7:00 Tuesdays.

Assignments:**Participation 15%**

Your active participation in large and small groups is necessary for the course to be a meaningful experience. Attendance will be taken each class and discussion groups. Course assignments are based on course material so it is important to attend all sessions.

The purpose of the discussion groups is to provide a forum for discussing the assigned reading and reflecting in depth on how it applies personally to the student. Students are expected to come to each session and to come prepared. Students will work in groups of 4 with a rotating Chair and follow the agenda provided for each session. The general format will be as follows:

- The TAs will introduce the material and start with a quick class discussion (5-10 mins).
- Groups will discuss the main issues from the reading and each group member will be given the opportunity to talk with their peers about their own ideas, thoughts and experiences (20-25 mins).
- Each assigned Chair will give a short (1-2 mins), informal presentation to the class on the results of the group discussion. This can either cover a general summary or can go into depth about a particular topic of interest. All members of the group will contribute to crafting the presentation. (The TA's will grade participation and presentations.)

Reflection Questions 30%

Reflection questions will be assigned every week at the end of class. Reflection questions are due at the beginning of the following class, before the lecture begins. They will not be accepted after this time. They are not to be submitted electronically.

Reflection questions will be returned to students within two weeks of submission. Entries should be typed,

double-spaced, and up to a maximum of 250 words in length. These questions offer an opportunity to reflect on topics and concepts covered in the course and to explore your own leadership ideas and development. Some weeks the assignment will involve answering questions based on readings and lecture, other weeks the assignment will be reflective questions related to leadership for you to answer from your own perspective and experience. (The TA's will grade the reflection questions.)

Group Interview 30%

Students will be given the opportunity to gain insight into different leadership styles by interviewing top role model leaders from industry, politics and non-profit organizations. Students will be split into groups of 4-5 and assigned a role model leader depending on their top 5 choices from a list provided in Week 2. The groups will form interview questions which will reflect themes given from the course material. The group will be responsible for organizing and conducting the interview. Marks will be assigned as follows:

- Each group will submit a Group Interview Paper (10%) which will include the interview transcript and a group reflection on the entire process.
- Each group will give an Interview Presentation (20%) where communication skills and insight will be assessed by the course instructors and TA's.
- Students must attend a reflection session on the week following the presentation ('Integration and Reflection of Interviews') to discuss the different leadership styles encountered. Your participation will be evaluated.

Final Paper (25%) (Final Reflection)

The final paper is an opportunity to pull together the course content, the information from the interviewing process and the student's own reflection and experience. The student will submit a report (6-8 pages, not to exceed 2000 words) that will demonstrate their understanding of leadership and what they will do to develop themselves as a role model leader. (The instructors will grade the final paper.)

May 2009

APS1010: Cognitive and Psychological Foundations of Effective Leadership

**Cognitive and Psychological Foundations of Effective Leadership:
The Leader's Brain
FALL 2009 Thursday Evenings 5-8PM (GB217)
Dr. Robin Sacks - robin.sacks@utoronto.ca**

Course Description

This course investigates the cognitive and psychological foundations of effective leadership. Students will explore current theories driving effective leadership practice including models of leadership, neurophysiological correlates of leadership and psychodynamic approaches to leadership. Students will learn and apply skills including mental modeling, decision-making, teamwork, giving and soliciting feedback and self-evaluation techniques. This course is aimed at helping students to gain practical skills that will enhance their impact as leaders throughout their careers.

Assignments

1. **Personal Leadership portfolio**

2. **Team Assignments** –class presentations

(some class time will be given to work on group projects)

3. **Two personal responses** (2-3 pages)

1. One response to a course reading
2. One response to a course activity

4. **Final Exam** - Short Essay, take home exam

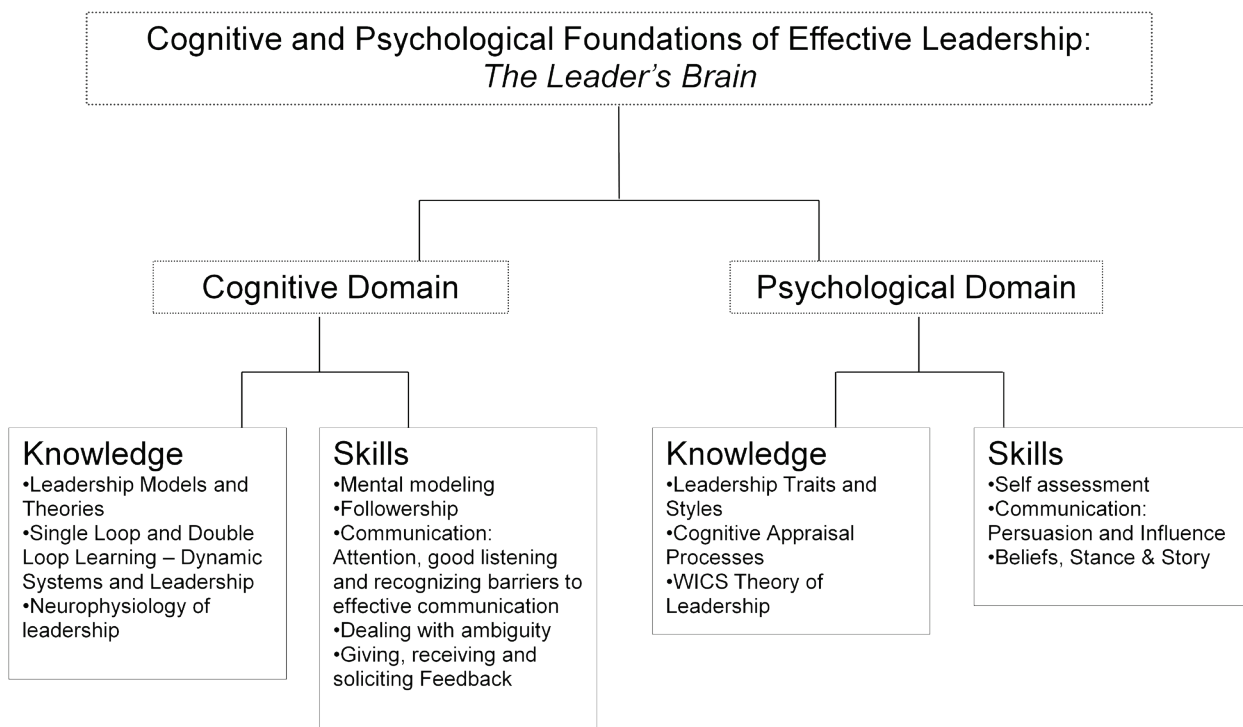
(Distributed toward the end of the semester - class will discuss to determine timing that doesn't interfere with engineering exams.)

Reading List (subject to modification)

- Serman, J D. (2002). All models are wrong: reflections on becoming a systems scientist. *System Dynamics Review*, 18(4), 501-531.
- Johnson, Homer, J (2008) Mental models and transformative learning: The key to leadership development? *Human Resources Development Quarterly*, 19(1) pp. 85-89.
- Goleman, D. (2000). Leadership that gets results. *Harvard business review*, 78(2), 78.
- Arjyris, C. (1994). Good communication that blocks learning. *Harvard Business Review*. July-August 1994, pp.77-85.
- Heifitz, R. & Laurie, D. (1997). The work of leadership. *Harvard Business Review*. January-February 1997, pp.124-134.
- Williams, G. & Miller, R. (2002). Change the way you persuade. *Harvard Business Review*. May 2002, pp.65-73.
- Pearce, C L. (2009). Where Do We Go From Here?: Is Shared Leadership the Key to Team Success?. *Organizational dynamics*, 38(3), 234-238.

- Manz, C C. (2009). Everyone a Team Leader: Shared Influence at W. L. Gore & Associates. *Organizational dynamics*, 38(3), 239-244.
- Uhl-Bien, M. (2006). Relational Leadership Theory: Exploring the social processes of leadership and organizing. *The leadership quarterly*, 17(6), 654-676.
- Ensley, M D. (2006). The importance of vertical and shared leadership within new venture top management teams: Implications for the performance of start-ups. *The leadership quarterly*, 17(3), 217-231.
- Sternberg, R. (2008). The WICS approach to leadership: Stories of leadership and the structures and processes that support them. *Leadership Quarterly*, 19 pp.360-371.
- Farris, G.F. & Cordero, R. (2002). Leading your scientists and engineers. *Research technology management*. November-December 2002. pp 13-25.

Course Map



APS1011: Concepts and Application of Authentic Leadership

Course Designed by: Nick Evans and Wayne Stark

Course Description

This course challenges the notion that leadership is a prescribed set of behaviours and allows students to explore their own authentic leadership. The exploration will start with students working through their values system, reflecting on their own meaningful experiences, and compiling the common elements into their purpose. Students will identify their gifts, abilities and skills, and gain an understanding of their natural approach to working. Students will be provided with a number of tools and models to understand their own behaviour, patterns and stories. The middle section of the course will shift to a leader shaping the environment and providing feedback and coaching to others. As an outcome, students will be able to create for themselves the environments and dynamics in which they do their best work and be able to do the same for others. The final section of the course will help students translate their natural authentic leadership into strategies for change and thereby enabling them to become change agents. Students will learn an approach to see new possibilities, develop strategies for sustainable change, and to articulate these strategies in ways that will engage and align others. This course is aimed at helping engineering students to combine their knowledge and practical skills with their natural authentic leadership in order to create meaningful and sustainable work for themselves and those around them.

Learning Objectives

- Students will be able to articulate the core elements of their own authentic leadership including who they are and who they want to be.
- Students will be able to identify their choices in day to day situations and analyze their congruence to their authentic leadership.
- Students will be able to adjust their actions to change the environment, dynamics and outcomes, and as a result align “What” they need to do, “Why” they want to do it”, with “How” they do it best.
- Students will demonstrate the skills to provide feedback and be able to apply a coaching approach to conversations with others.
- Students will learn how to identify growth opportunities that are constrained by current assumptions, capabilities & approaches and are aligned to our true intentions.
- Students will be able to write strategies that will deliver improved sustainable growth for individuals, organizations, and society.

Student Evaluation

1. Class Participation

Weekly in-class contributions and two one-page written contributions will be evaluated on depth and insight. Students will have the option to put more weight on the in-class verbal or on the written contributions. **20 % of your final grade**

2. Written Assignment and Presentation – ‘My Authentic Leadership’

Students will be asked to write an essay about your own authentic leadership. As part of the process students will also be asked to share, in small groups, elements of your summary. Content will be generated from the in-class workshop material and from a personal leadership journal. **25% of your final grade**

3. Paper on Coaching Others and Providing Feedback

Students will be asked to read several articles on coaching, listen to a lecture on coaching and have an opportunity to practice coaching a fellow student. The paper will require the students to outline their coaching approach to 5 different scenarios, and to reflect on their own experience coaching others and being coached. **25% of your final grade**

4. Final Assignment – ‘Team Project on Building Strategy’

The final assignment will be the application of the course material on authentic strategy. Students will be provided with a key change in society and challenged to develop possible strategies for the future. Individuals will be assigned to groups, and as a team you will need to align to one strategy and create engagement plan. Grades will capture both the quality of the thinking as captured in the class presentation and on a summary the team provides on what they learned as a group of leaders during the process. **30% of your final grade**

Instructors

Wayne K. Stark is the Managing Partner, Pursuit Development Labs Inc., a Toronto firm focused in the areas of organizational strategic and cultural transformation, and the development of authentic inspired leadership.

Nick G. Evans is the Principal at eⁿ Performance Inc, and focuses on executive coaching and leadership development.

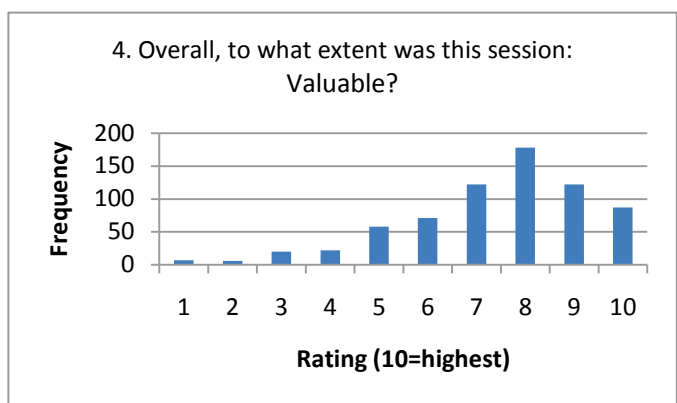
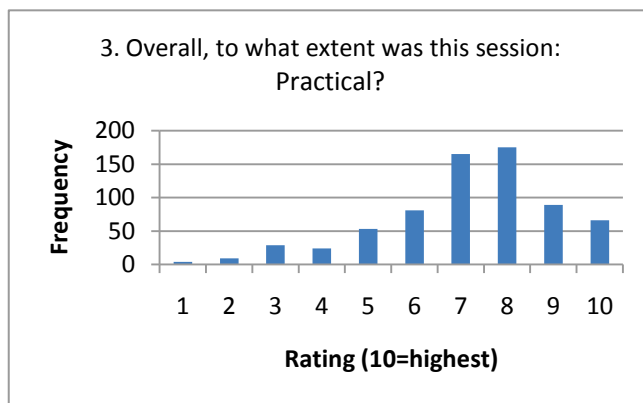
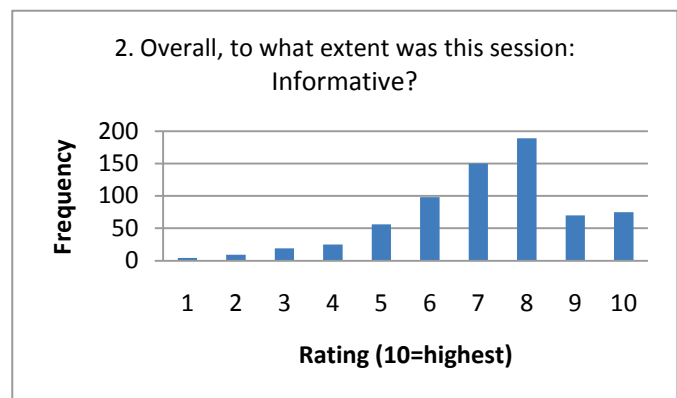
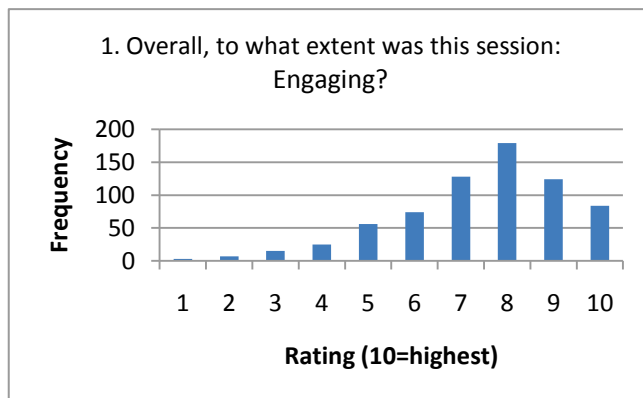
Appendix D: Curricular Program – Leadership Infusion Lectures

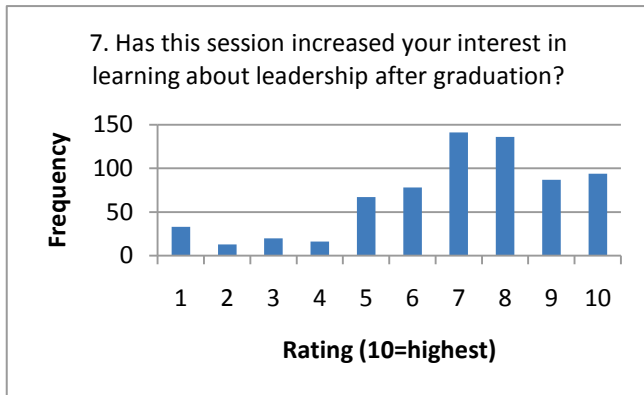
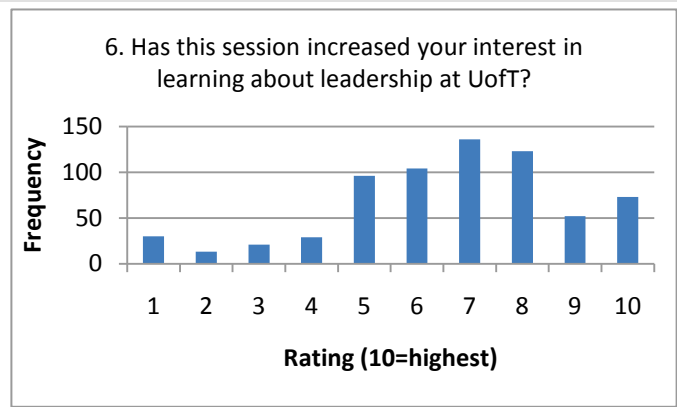
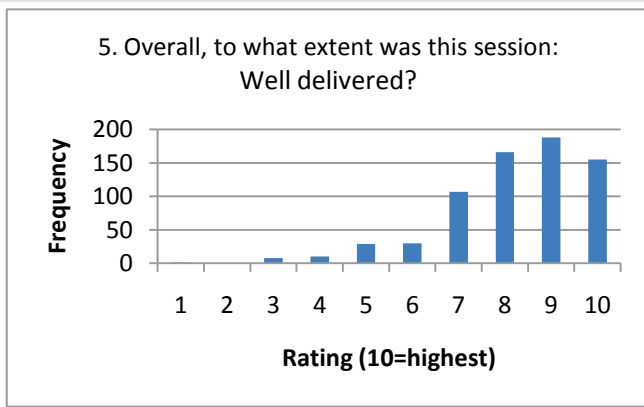
Full Schedule of Leadership Infusion Lectures, 2009-2010

No.	Date	Term	Course Code	Lecture Topic	Survey Responses Collected
1	22/09/2009	F	CME368	Leadership and Citizenship	57
2	06/10/2009	F	CHE208	Leading in Teams	21
3	08/10/2009	F	MSE244	Leading in Teams	43
4*	13/10/2009	F	MIE350	Leading in Teams	n/a
5	30/10/2009	F	CHE324	Leadership and Citizenship	28
6	16/11/2009	F	CME270	Leading in Teams	20
7	04/12/2009	F	APS111	Engineering Leadership	166
8*	08/12/2009	F	CHE308	Engineering Leadership	n/a
9	06/01/2010	W	CHE230	Leading in Teams	n/a
10	07/01/2010	W	MIE191	Developing Your Potential	136
11	19/01/2010	W	ESC301	Developing Your Potential	16
12	26/01/2010	W	ESC301	Leading in Teams	16
13	08/02/2010	W	MSE290	Developing Vision	44
14	22/02/2010	W	CHE230	Developing Vision	49
15	18/03/2010	W	MIE315	Developing Vision	49
16	18/03/2010	W	MIE315	Developing Vision	34
17	06/04/2010	W	APS112	Developing Your Potential	20

*Surveys were not distributed for these lectures.

Histograms of Question Responses (All lectures, n=699)

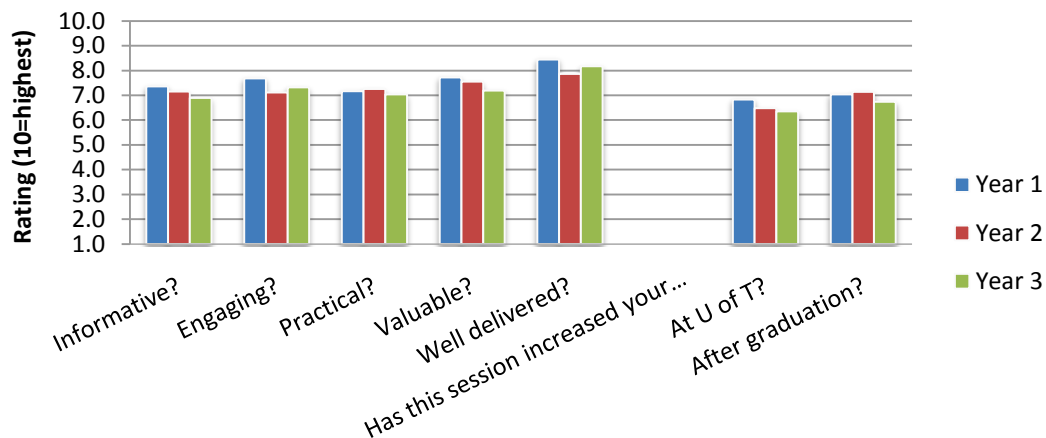




Infusion Lecture Analysis by Cohort

We have analyzed differences in feedback between first, second, and third year students. The graph below shows that the three cohorts rated the lectures similarly across all questions, with first-year students generally rating the lectures slightly higher than second-year and third-year students.

Survey Response Averages by Cohort



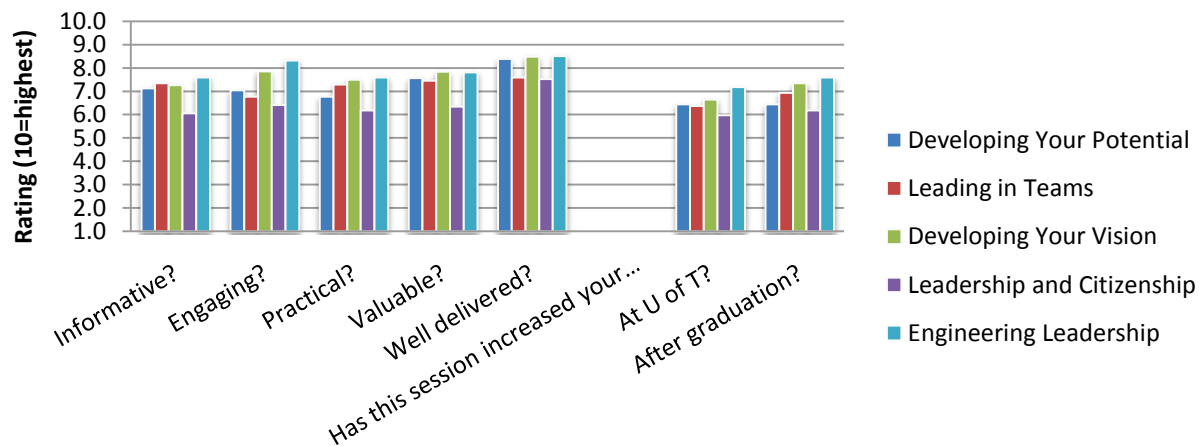
The following table presents response averages analysed by cohort, and whether the differences between their averages represent statistically significant changes. We present these averages for your information, however, we do not believe the relatively small differences, even statistically significant ones, amount to substantial conclusions due to the limitations of the data.

Overall, to what extent was this session...	Year 1	Year 2	Year 3	Statistically significant? ($\alpha=0.05$)
Informative?	7.4	7.2	6.9	Yes
Engaging?	7.7	7.1	7.3	Yes
Practical?	7.2	7.3	7.0	No
Valuable?	7.7	7.6	7.2	No
Well delivered?	8.5	7.9	8.2	Yes
Has this session increased your interest in learning about leadership...				
At U of T?	6.8	6.5	6.3	Yes
After graduation?	7.0	7.1	6.7	No
Lecture Average	7.5	7.2	7.1	
n	320	177	197	

Infusion Lecture Analysis by Topic

In addition to comparing results between cohorts, we have also undertaken analysis of feedback between the five lecture topics. We see that there are no striking variations; generally, students rated each lecture similarly, with topics ‘Developing Your Potential’ and ‘Developing Your Vision’ being the best-received lectures.

Survey Response Averages by Lecture Topic



Overall, to what extent was this session...	Developing Your Potential	Leading in Teams	Developing Your Vision	Leadership and Citizenship	Engineering Leadership	Statistically significant? ($\alpha=0.05$)
Informative?	7.1	7.4	7.3	6.1	7.6	Yes
Engaging?	7.0	6.8	7.9	6.4	8.3	Yes
Practical?	6.8	7.3	7.5	6.2	7.6	Yes
Valuable?	7.6	7.5	7.8	6.3	7.8	No
Well delivered?	8.4	7.6	8.5	7.5	8.5	Yes
Has this session increased your interest in learning about leadership...						
At U of T?	6.4	6.4	6.7	6.0	7.2	Yes
After graduation?	6.4	6.9	7.3	6.2	7.6	Yes
Lecture Average	7.1	7.1	7.6	6.4	7.8	
n	171	100	175	84	165	

The preceding table presents response averages analysed by lecture topic, as well as whether differences between these averages are great enough to be considered statistically significant. Again, we note that employing a Likert scale of 10 results in little substantial information. If these averages were more severely varying, then we might infer real differences between how students received the lectures, which would call for further investigation. However, this is not the case.

Appendix E: Co-Curricular Certificate Program Survey Analysis

Hypothesis Testing for Certificate 2 (Fall 2009)

The following tables present the results of t-tests performed to determine the statistical significance of the changes in average response to the Pre- and Post-Surveys. These results allow us to infer with 95% confidence that the students actually responded more favourably to these questions have having completed the certificate program.

$$H_0: \mu_1 = \mu_2 \qquad H_1: \mu_1 \neq \mu_2 \qquad \alpha = 0.05$$

Statistic	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11
Mean (pre/post)	4.95/ 6.00	5.29/ 6.78	3.95/ 5.57	4.29/ 5.78	2.86/ 5.39	4.24/ 5.78	5.62/ 6.39	4.71/ 5.70	4.05/ 5.61	4.29/ 5.70	4.33/ 5.96
t Stat	-4.91	-5.34	-5.43	-3.89	-5.93	-5.13	-3.23	-3.66	-3.88	-3.32	-5.16
P(T≤t) one-tail	7.03E- 06	1.74E- 06	1.29E- 06	0.0001	2.46E- 07	3.44E- 06	0.0012	0.0003	0.0002	0.0009	3.16E- 06
t Critical one-tail	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68

Hypothesis Testing for Certificate 1 (Winter 2010)

$$H_0: \mu_1 = \mu_2 \qquad H_1: \mu_1 \neq \mu_2 \qquad \alpha = 0.05$$

Statistic	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
Mean (pre/post)	5.08/5.82	4.44/5.66	4.84/6.24	4.1/5.28	4.20/5.13	5.00/5.68	5.20/6.11	4.68/6.11	4.32/5.79
t Stat	-2.35	-4.72	-5.14	-2.73	-2.37	-1.82	-2.41	-3.37	-4.75
P(T≤t) one-tail	0.012	1.31E-05	3.42E-06	0.0046	0.011	0.038	0.010	0.0008	1.31E-05
t Critical one-tail	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68

Appendix F: LOT Faculty Office Events

This table presents a complete schedule of this year’s activities as well as the number of participants involved in each. Events marked (*) denote a collaboration with other department/divisions groups.



Total Contacts: 4287

Date	Event	No. of Participants	
15-May-09	Chem Summer Program: Info Session	40	*
29-May-09	Chem Summer Program: Self-Leadership Workshop	35	*
3-Jun-09	MIE Summer Program Emotional Intelligence	30	*
5,6,7-June-09	New U Leadership Conference	150	
6-Jun-09	New U: Emotional Intelligence	19	
10-Jun-09	Facilitation Workshop for TETRA	15	
11-Jun-09	Women’s Leadership Meeting	9	
18-Jun-09	U of T Summer Institute on Leadership	60	
19-Jun-09	Chem Summer Program: Facilitation Skills	35	*
7-Jul-09	Women’s Leadership Meeting	6	
22-Jul-09	LOT:G BBQ	200	*
6-Aug-09	Poet in Community Workshop for Women in Engineering	7	
13-Aug-09	UnERD Conference	120	
25-Aug-09	Facilitation Workshop for Club Leaders	18	
25-Aug-09	Dean’s Lunch Pre-Meeting	16	
26-Aug-09	LOT lunch with the Dean	20	
9-Sep-09	Faculty Day Session 1	51	
9-Sep-09	Faculty Day Session 2	53	
9-Sep-09	Faculty Day - Women’s Leadership Event	25	
16-Sep-09	MIE Working Group Meeting	10	*
19-Sep-09	Certificate Make-Up Session	2	
21-Sep-09	APS 501 – Facilitating Groups	38	
22-Sep-09	Infusion Lecture - CME 368 - Leadership and Citizenship	57	
23-Sep-09	Certificate 2: Leading from the Inside Out – Workshop #1	31	
24-Sep-09	Civil Engineering Student Working Group Meeting	6	*
30-Sep-09	Certificate 2: Leading from the Inside Out – Workshop #2	27	
1-Oct-09	Drew Dudley - Event Planning Session	19	
5-Oct-09	APS 501- ‘Myers-Briggs’ seminar	38	
6-Oct-09	Infusion Lecture - CME208 - Leading in Teams	21	
7-Oct-09	Certificate 2: Leading from the Inside Out – Workshop #3	30	
8-Oct-09	Infusion Lecture - MSE 244 - Leading in Teams	53	
13-Oct-09	Infusion Lecture - MIE350 - Leading in Teams	30	
14-Oct-09	Certificate 2: Leading from the Inside Out – Workshop #4	30	
26-Oct-09	APS 501: Discover Your Personal Mission	38	
30-Oct-09	Infusion Lecture - CME 324 - Leadership and Citizenship	28	
11-Nov-09	Awaken the PowHer: Workshop for Women in Engineering	21	
14-Nov-09	Leadership Training Day	35	
16-Nov-09	MSE: Team Dynamics & Dodge ball	29	*
16-Nov-09	Infusion Lecture - CIV270 - Leading in Teams	50	

Date	Event	No. of Participants	
16-Nov-09	APS 501 – Emotional Intelligence	38	
1-Dec-09	Emotional Intelligence for WEE (Women Empowered in Engineering)	20	
2-Dec-09	Presentation to Chairs and Directors	10	
4-Dec-09	Infusion Lecture - APS 111 - Engineering Leadership	700	
8-Dec-09	Infusion Lecture - CHE308 - Engineering Leadership	15	
10-Dec-09	Presentation to Governing Council	9	
6-Jan-10	Infusion Lecture - CHE230 - Leading in Teams	150	
7-Jan-10	Infusion Lecture - MIE 191 - Developing Your Potential	220	
12-Jan-10	Second City workshop	15	
15-Jan-10	David Miller planning meetings	3	
18-Jan-10	David Miller planning meetings	3	
19-Jan-10	Infusion Lecture - ESC301 - Developing Your Potential	19	
19-Jan-10	Certificate 1: Team Skills, Session 1	27	
20-Jan-10	Mayor David Miller event	230	
26-Jan-10	Infusion Lecture - ESC301 - Leading in Teams	19	
26-Jan-10	Certificate 1: Team Skills, Session 2	25	
1-Feb-10	LOT:G 'Leadership Through the Arts' with Annie Simpson	12	
2-Feb-10	Certificate 1: Team Skills, Session 3	24	
5-Feb-10	Special Energy Options Talk	19	
8-Feb-10	Infusion Lecture - MSE290 - Developing Vision	52	
9-Feb-10	Certificate 1: Team Skills, Session 4	20	
10-Feb-10	Special talk with Prof. Ruben Gaztabide-Fernandez, OISE	18	
22-Feb-10	Infusion Lecture - CHE230 - Developing Vision	100	
27-Feb-10	<i>Women Empowered in Engineering</i>	7	
9-Mar-10	Team Skills Certificate, Session 5 Final Dinner	19	
13-Mar-10	Leading in a Diverse World' with Shakil Choudhury	13	
18-Mar-10	Infusion Lecture - MIE315 - Developing Vision (Section 1)	100	
18-Mar-10	Infusion Lecture - MIE315 - Developing Vision (Section 2)	100	
24-Mar-10	LOT:G 'The Courage to Lead' with Annie Simpson	28	
25-Mar-10	Track One Student Panel Preparation	3	
29-Mar-10	Track One Panel Lecture	150	
29-Mar-10	APS1011 - testimonial recording	6	
31-Mar-10	Working Group Appreciation Night	70	
6-Apr-10	Infusion Lecture - APS 112 - Developing Your Potential	400	
30-Apr-10	EngSci Working Group Retreat facilitated by Annie Simpson	13	*
	Sub-total	4159	
	Cross-Faculty Working Group Meetings		
1-Sep-09	Working Group Retreat	20	
17-Sep-09	Working Group Meeting	15	
30-Sep-09	Working Group Meeting	13	
15-Oct-09	Working Group Meeting	9	
21-Oct-09	Working Group Meeting	3	
29-Oct-09	Working Group Meeting	10	
25-Nov-09	Working Group Meeting	7	
13-Jan-10	Working Group Meeting	9	
22-Jan-10	Working Group Meeting	9	
3-Mar-10	Working Group Meeting	10	
10-Mar-10	Video filming day	5	
12-Mar-10	Appreciation Night planning	3	
30-Mar-10	Working Group Meeting	3	
7-Apr-10	Working Group Meeting	12	
	Sub-total	128	
	Total Contacts	4287	

Appendix G: Department and Division Working Group Events

Events marked (*) denote collaboration with the LOT faculty office.



Department of Chemical Engineering and Applied Chemistry (CHEM LOT)

Total Contacts: 928

Date	Event	No. of Participants	
15-May-09	Chem Info Session	40	*
22-May-09	<i>Leading Transformational Change</i> with Professor David Colcleugh	27	
29-May-09	Workshop on Self-Leadership	35	*
5-Jun-09	<i>Who Could You Be in the World?</i> with Robin Sacks and Ellie Avishai	24	
12-Jun-09	<i>Managing Your Career</i> with Nina Reilly	28	
19-Jun-09	Facilitating Groups with Annie Simpson	35	*
26-Jun-09	Project Work Day	27	
3-Jul-09	Group Excursion to Lake Ridge, LEFE – High Ropes Activity	21	
10-Jul-09	Coaching and Mentoring Others with Anandhi Narayanan and Christina Ens	31	
17-Jul-09	Sanofi Plant Tour	18	
24-Jul-09	Workshop on Myers Briggs with Elaine Preston	27	
31-Jul-09	Engineering & Public Policy with Professor Doug Reeve	27	
7-Aug-09	Community Activity	20	
14-Aug-09	Project Work Day	27	
21-Aug-09	Final Team Project Presentations	28	
22-Sep-09	Information session	47	
30-Sep-09	Alumni Breakfast	29	
30-Oct-09	First Year Lab Tours	32	
4-Nov-09	Networking Tutorial	30	
18-Nov-09	PEY Panel	21	
26-Jan-10	Ace the Interview	32	
22-Jan-10	Research Days I	60	
29-Jan-10	Research Days II	40	
5-Feb-10	Energy and Engineering	30	
10-Feb-10	Finance Your Education	25	
13-Feb-10	Scavenger Hunt – Leadership Training	16	
9-Mar-10	Global Engineering 4 Dummies	35	
9-Apr-10	Year End Social	11	
	Sub-total	823	
	Working Group Meetings		
19-Aug-09	Working Group Meeting	17	
23-Sep-09	Working Group Meeting	31	
28-Oct-09	Working Group Meeting	15	
25-Nov-09	Working Group Meeting	13	
6-Jan-10	Working Group Meeting	16	
10-Feb-10	Working Group Meeting	7	
3-Mar-10	Working Group Meeting	6	
	Sub-total	105	
	Total Contacts	928	



Department of Material Science and Engineering (MSE LOT)

Total Contacts: 347

Date	Event	No. of Participants
2-Oct-09	MSE LOT Launch Event	19
10-Oct-09	Website/Mailing List Launch	16
30-Oct-09	Group Dynamics Event, Newsletter, Industry day	9
1-Nov-09	PEY Panel	22
3-Nov-09	Industry Newsletter	18
16-Nov-09	Group Dynamics and Dodge ball	29
14-Jan-10	Cross-Faculty: Second City Workshop	7
4-Feb-10	Haiti Charity Week: Games Night	21
5-Feb-10	Haiti Charity Week: Dodgeball Tournament	45
22-Mar-10	MSE Recruitment Event	12
24-Mar-10	Grad School Panel	43
	Sub-total	241
	Working Group Meetings	
6-Aug-09	Group Introduction, Objective Brainstorm	5
22-Sep-09	Funding Proposal, Semester Objectives	8
8-Oct-09	Yearly Planning, Brainstorming	8
21-Oct-09	Brainstorming, Internal Affairs	5
30-Oct-09	Team Dynamics & Newsletter Brainstorm	9
10-Nov-09	Leadership Training Day, Dodgeball Planning	11
7-Jan-10	Recap and Semester Planning	10
15-Jan-10	Community Responsibility Brainstorm	9
21-Jan-10	Community Responsibility Tasks	7
2-Feb-10	Newsletter Planning, Haiti Fundraiser	8
25-Feb-10	Haiti Debrief, NBTC Subsidy, Panel Ideas	11
11-Mar-10	Brainstorming, Transition	7
17-Mar-10	Grad School Panel, Transition	8
	Sub-total	106
	Total Contacts	347



Department of Electrical and Computer Engineering (ECE LOT)

Total Contacts: 633

Date	Event	No. of Participants
3-Sep-09	LOT Introductory Lunch	11
21-Sep-09	Engineering Entrepreneurship series with Avanindra Utukuri	40
30-Sep-09	Engineering Entrepreneurship series with Tony Lacavera	40
2-Oct-09	Time Management Seminar with Glen Matedeen	20
15-Oct-09	Entrepreneurship Seminar with Cameron Serles	25
16-Nov-09	Engineering Entrepreneurship series with Farhad Shafaii	25
25-Nov-09	United Way Fundraiser: Sushi Cook-Off	20
26-Nov-09	Engineering Entrepreneurship Series with speaker Cameron Series	40
27-Nov-09	Exam Study Tips Seminar with ECE working group	25
2-Dec-09	Networking 101 with speaker: Glen Matedeen	15
28-Jan-10	PEY Panel (Co-hosted with IEEE)	40
1-Feb-10	Fundraiser for Haiti (with Other LOTs)	25
2-Feb-10	Magellan Course Selection Session	45
3-Feb-10	Engineering Entrepreneurship series with Mike Montano	25
4-Mar-10	Engineering Entrepreneurship series with Sandro DePede	25
9-Mar-10	Engineering Entrepreneurship series with Terry Mathews	30
14-Mar-10	Ice Cream Social	10
24-Mar-10	Friends of Design Networking Lunch	50
25-Mar-10	Engineering Entrepreneurship series with Jeff Shell and Conor Dickie	25
	Sub-total	536
	Working Group Meetings	
18-May-09	Working Group Meeting	9
26-Jun-09	Working Group Meeting	8
10-Jul-09	Working Group Meeting	8
24-Aug-09	Working Group Meeting	7
16-Sep-09	Working Group Meeting	8
30-Oct-09	Working Group Meeting	9
3-Nov-09	Working Group Meeting	6
24-Nov-09	Working Group Meeting	8
8-Jan-10	Working Group Meeting	15
26-Feb-10	Working Group Meeting	9
5-Mar-10	Working Group Meeting	6
6-Apr-10	Planning Meeting	4
	Sub-total	97
	Total Contacts	633



Mechanical and Industrial Engineering (MIE LOT)

Total Contacts: 444

Date	Event	No. of Participants	
8-May-09	LOT Introductory Lunch- Welcome	50	
3-Jun-09	<i>Emotional Intelligence and Leadership</i> with Annie Simpson	30	*
20-Jul-09	Habitat For Humanity Build	12	
22-Jul-09	<i>Conflict Transformation</i> with Anitta Satkunarajah	30	
5-Aug-09	<i>Start Now!</i> Career Development with Sheri Browne-Howe and Flo Zeng	25	
13-Aug-09	Volunteering at Downsview Park with Evergreen	12	
20-Aug-09	End-of-the-Year Social Event	15	
14-Sep-09	LOT Kick off Lunch	40	
16-Sep-09	MIE Working Group Meeting	10	*
11-Nov-09	<i>Ace the Interview</i>	50	
13-Nov-09	Globalization Workshop With Professor Murray Metcalfe	15	
29-Jan-10	MIE Alumni Career Panel	60	
4-Feb-10	Etiquette Dinner (Faculty Club)	30	
	Sub-total	379	
27-Aug-09	Working Group Meeting	16	
17-Sep-09	Working Group Meeting	20	
4-Oct-09	Working Group Meeting	5	
24-Nov-09	Working Group Meeting	10	
5-Jan-10	Working Group Meeting	11	
22-Mar-10	Working Group Meeting	3	
	Sub-total	65	
	Total Contacts	444	



Division of Engineering Science (EngSci LOT)

Total Contacts: 472

Date	Event	No. of Participants	
1-May-09	Leadership Retreat for Working Group	20	
10-Sep-09	First Year Orientation Day	350	
15-Jan-10	Debates Workshop	3	
	Sub-total	373	
19-May-09	Working Group Meeting	10	
1-Jun-09	Working Group Meeting	10	
7-Jul-09	Working Group Meeting	10	
1-Oct-09	Working Group Meeting	12	
22-Oct-09	Working Group Meeting	12	
1-Dec-09	Working Group Meeting	12	
11-Feb-10	Working Group Meeting	10	
22-Mar-10	Working Group Meeting	10	
30-Apr-10	EngSci Working Group Retreat facilitated by Annie Simpson	13	*
	Sub-total	99	
	Total Contacts	472	



Department of Civil Engineering (CIV LOT)

Total Contacts: 43

Date	Event	No. of Participants	
12-Nov-09	Resume and Cover letter workshop	20	
	Sub-total	20	
24-Sep-09	Working Group Meeting	6	*
11-Nov-09	Working Group Meeting	17	
	Sub-total	23	
	Total Contacts	43	



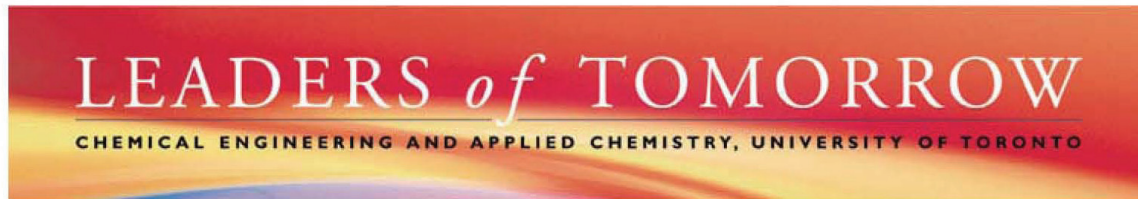
Leaders of Tomorrow: Graduate (LOT:G)

Total Contacts: 918

Date	Event	No. of Participants	
4-Jun-09	Innovation Potential Workshop with Professor Brenda McCabe	23	
15-Jul-09	Media Relations with Liam Mitchell	25	
22-Jul-09	LOT: G BBQ With LOT G Committee	200	*
7-Aug-09	The Art of Coaching with A. Narayanan & C. Ens (Celestica)	35	
10-Oct-09	Leading your Thesis with Professor Mark Kortshot	20	
23-Oct-09	Leadership 101 With Val Cortes and Ian Simmie	20	
29-Oct-09	<i>How to get your P. Eng</i> With Manoj Choudhary, PEO	30	
18-Nov-09	Learning Languages With Professor Doug Reeve	73	
13-Jan-10	'Leading the Business Enterprise...' with Prof. David Colcleugh	30	
9-Feb-10	Negotiating your way to success	72	
22-Feb-10	Leadership Through Action	10	
19-Mar-10	Anima Social Event	20	
20-Mar-10	Anima Day 1: The Drive to Lead with Annahid Dashtgard	37	
24-Mar-10	Anima Day 2: The Courage to Lead with Annie Simpson	26	*
10-Apr-10	Anima Day 3: The Vision to Lead with Annahid Dashtgard	22	
	Sub-total	643	
16-Jul-09	Working Group Meeting	9	
7-Aug-09	Working Group Meeting	16	
31-Aug-09	Working Group Meeting	10	
11-Sep-09	Working Group Meeting	8	
1-Oct-09	Working Group Meeting	15	
6-Oct-09	Working Group Meeting	11	
16-Oct-09	Working Group Meeting	3	
20-Oct-09	Working Group Meeting	5	
21-Oct-09	Working Group Meeting	20	
19-Nov-09	Working Group Meeting	6	
25-Nov-09	Working Group Meeting	10	
11-Dec-09	Working Group Meeting	6	
15-Dec-09	Working Group Meeting	8	
16-Dec-09	Working Group Meeting	16	
7-Jan-10	Stakeholders Team Meeting	7	
8-Jan-10	Board Level Team Meeting	7	
9-Jan-10	Process Team Meeting	6	
13-Jan-10	Strategy Team Meeting	5	
15-Jan-10	Seminar Team Meeting	4	
18-Jan-10	Marketing and Communication Team Meeting	4	
18-Jan-10	Community Outreach Team Meeting	4	
20-Jan-10	Working Group Meetings	13	
22-Jan-10	Anima Team Meeting	7	
28-Jan-10	Culture Team Meeting	5	
4-Feb-10	Anima Team Meeting	8	

Date	Event	No. of Participants
9-Feb-10	Board Level Team Meeting	5
10-Feb-10	Working Group Meeting	9
18-Feb-10	Strategy Team Meeting	5
4-Mar-10	Working Group Meeting	9
12-Mar-10	Anima Team Meeting	9
29-Mar-10	Working Group Meeting	13
5-Apr-10	Process Team Meeting	6
13-Apr-10	Working Group Meeting	6
	Sub-total	275
	Total Contacts	918

Appendix H: Chemical Engineering Summer Program 2009 Schedule



SUMMER PROGRAM 2009

Start time 1:10 pm - unless otherwise stated

DATE	EVENT	GUEST	PLACE	HOST
May 22	Leading Transformational Change	David Colcleugh	WB219	DP
May 29	Self Leadership	Annie Simpson	WB219	MK
June 5	Who Could You Be in the World	Robin Sacks & Ellie Avishai	WB219	AS
June 12	Managing Your Career	Nina Reilly	WB219	MK
June 19	Facilitating Groups	Annie Simpson	WB219	DP
June 26	Project Work Day		WB242	MK
July 3	Lake Ridge, LEEF	Excursion	Meet in WB219 Time: 7:45 am	DP
July 10	Coaching and Mentoring Others	Anandhi Narayanan & Christiana Ens	WB219	AS
July 17	Sanofi	Excursion	Meet in WB219 Time: TBA	DP
July 24	Myers Briggs	Elaine Preston	WB219	DP
July 31	Public Policy	Doug Reeve	WB219	DP
August 7	Community Activity/Grange Festival	Student Run	Meet in WB219 Time: TBA	DP
August 14	Project Work Day		WB242	MK/DP
August 21	Final Team Project Presentations	Alumni Judges	Galbraith Building, GB202	MK/DP

Appendix I: LOT In the News

The Engineering Newsletter: 'LOT Program Hosts Mayor David Miller'

Below is a reproduction of a piece in *The Engineering Newsletter*, Volume 3, Issue 9 (published February 10, 2010). View online at: http://www.eneews.engineering.utoronto.ca/Volume3/Issue9/Issue9_story02.html.

The Engineering Newsletter

Faculty of Applied Science & Engineering | University of Toronto

Leaders of Tomorrow Program Hosts Mayor David Miller



By Anastasia Shteyn

On January 20th, The Blue Room of the Sanford Flaming Building resembled the floor at The Rolling Stones' concert, as students from across the Faculty took seats, seized the stairs and leaned against the walls to hear Mayor David Miller's vision of 'engineering the city' of Toronto.

Annie Simpson, the Assistant Director of Leadership Education, facilitated the event and welcomed Mayor Miller, an alumnus of the U of T Faculty of Law. Ms. Simpson then passed the microphone to student organizers from the *Leaders of Tomorrow* cross-Faculty group, Chirag Variawa M.Eng, Shahed Al-Haque (EngSci) and Jason Sukhram (MSE). Chirag and Shahed touched upon the vision of the LOT program and introduced the Mayor.

After these brief introductions, David Miller, now serving his second term as the Mayor of Toronto, shared

his perspective on the role of engineers in public policy. He was very impressed with the novelty of the *Leaders of Tomorrow* program, emphasizing that progressive education should include far more than technical knowledge.

David Miller then talked about the recent UN Climate Change Conference. In December, the City of Toronto was represented by Mayor Miller in Copenhagen, Denmark, as one of over 80 environmentally conscious metropolitans. “The Kyoto target can be reached,” the Mayor believes. David Miller repeatedly stressed the potential of Toronto as an energy-efficient city. He highlighted the Transit City, a rapid public transportation plan for the GTA. Mayor Miller’s passion about fighting climate change emerged during the post-talk interview, conducted by Jason Sukhram.

In response to Jason’s question about the role of engineers in environmental policy, Mayor Miller emphasized the demand for high ethical standards and the freshness of thought inherent to engineers. “Stay fresh, stay innovative,” was the Mayor’s wish to the audience.

As Mayor Miller stepped out of the auditorium, students surrounded him to ask more questions, to hear more insights or simply to shake the Mayor’s hand.

Newsletter Archives

Did you miss a past issue of the Engineering Newsletter? Revisit [past articles](#) and catch up on Faculty news on the [Engineering homepage](#).

The Engineering Newsletter is a twice-monthly summary of key headlines, events and opportunities for faculty and staff in the Faculty of Applied Science and Engineering. If you have questions or comments, please contact us: dean.engineering@ecf.utoronto.ca.

Follow us on Twitter: <http://twitter.com/uoftengineering>

All contents copyright © Faculty of Applied Science & Engineering, University of Toronto

Engineering Dimensions: ‘Program Offers New View of Engineering Leadership’

Below is a reproduction of a piece in *Engineering Dimensions* (July/August 2009 Issue). View the full publication online at: <http://www.peo.on.ca/DIMENSIONS/julyaug2009/julyaug2009.html>.

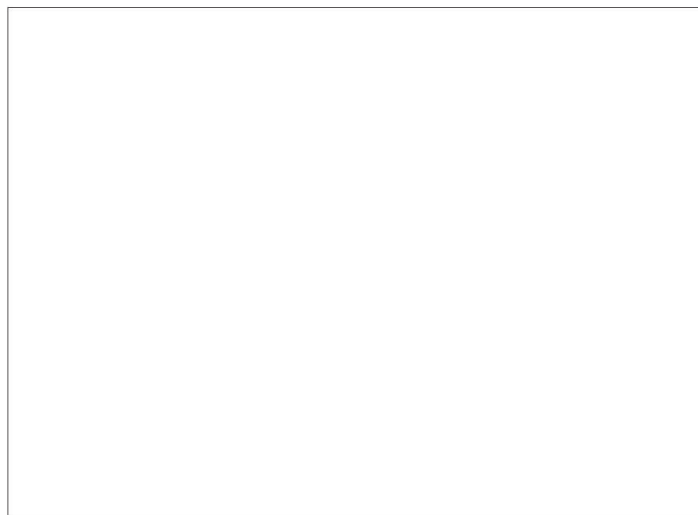
[NEWS]

Program offers NEW VIEW OF ENGINEERING LEADERSHIP

By Michael Mastromatteo



Leaders of Tomorrow student leadership development coordinator Annie Simpson leads a discussion group as part of the program’s summer component.



A leadership program instituted at the University of Toronto (U of T) is adding new meaning to professional ethics and the development of socially committed engineering practitioners.

The university’s Leaders of Tomorrow (LOT) program, established by the department of chemical engineering and applied chemistry in 2002 and now encompassing the entire engineering faculty, is aimed at giving students the knowledge, skills and experience to effect positive change in society as engineers and as citizens.

The program, which weaves leadership training and development opportunities throughout a student’s entire undergraduate experience, is the outgrowth of one educator’s view of engineering education.

Doug Reeve, PhD, P.Eng., chair of the chemical engineering and applied chemistry department, describes LOT as a key component in “a life-long foundation for transformational leaders and outstanding citizens.”

Reeve established the basics of the program within the department seven years ago, and by May 2006 he won approval for LOT to expand to all departments within the faculty of engineering and applied science.

Reeve and chemical engineering professor Greg Evans, PhD, P.Eng., are co-leaders of LOT and are now assisted by staff, faculty representatives and students.

Participation in the program is voluntary, but students entering their first year of engineering undergraduate studies are especially encouraged to become involved.

The LOT program primarily comprises lectures, projects and exercises to help students understand the idea of leadership from a new perspective. Leadership concepts are said to “infuse” the undergraduate curriculum, so that participants don’t lose sight of the program’s essentials and will be encouraged to show leadership prior to and after graduation.

A basic tenet of the program is that leadership is a skill that can be taught, and that leadership opportunities will enhance not only a practitioner’s career prospects but also his or her contributions to society.

The program has three main objectives. First, it provides structured activities to enhance an individual’s leadership development. Second, LOT encourages engineering graduates to make greater contributions in their work place, their community and to society. Finally, the program aims to improve the connection between engineering and

public policy, which enables participants to contribute to more technologically sound public policies.

EMOTIONAL INTELLIGENCE

In keeping with the leadership dimension, LOT involves some non-technical learning opportunities. Program topics include such areas as personal, group and societal leadership; personality type indicators; emotional intelligence; conflict resolution; facilitation skills; and even “dress for success” tutorials.

Participants are also encouraged to get involved in organizing debates, presentations and guest lectures, many of which enhance a student’s public speaking skills and poise.

Although there is no academic credit attached to the program, LOT awards a co-curricular certificate upon completion of specific leadership activities. But it’s in the personal development area that most students find LOT especially valuable.

Annie Simpson, LOT’s student leadership development coordinator, describes the program as more than a glorified engineering ethics course. She says LOT enhances and expands on the themes delivered to senior undergraduates through the university’s APS 501 course (leadership and leading for groups and organizations), which includes such topics as self-leadership, setting strategic direction and implementing change in an enterprise.

“I think APS 501 advances the objectives of LOT by offering intentional, meaningful leadership education opportunities,” Simpson told *Engineering Dimensions*. “Through the course, students learn a number of thinking frameworks, practise leadership skills, connect with leaders in community and industry, and engage in significant self-reflection.”

David Coleleugh, former president of the DuPont Company, both in Canada and in Asia-Pacific, is lead instructor for the course, and is also involved as an instructor with LOT’s

summer program, which involves leadership and team-building lectures for students working on or near the university campus for the summer months. Coleleugh recently kicked off the 2009 summer program with a lecture on “transformational change.”

Students involved with LOT reflect a new attitude about doing more with an engineering education in the social or community realm.

BLEND OF SKILL AND EXPERIENCE

Sabrina Tang, a third-year U of T industrial engineering student, says the program presents a good blend of skills and experiences.

“LOT has changed my understanding of leadership from thinking of it as a natural talent to a set of skills,” Tang says. “It gave me the opportunity to immediately put new skills into practice and to discuss leadership experiences with other students. It has also been crucial to my development, in realizing the importance of reflection and self-awareness in everything that I do.”

David Schatcer, a master’s degree student in mechanical and industrial engineering, suggests LOT also helps students discern a career direction. “Instead of simply following the career path that appears most profitable or easily attainable, I now seek a career that will allow me to make a positive impact on society,” Schatcer says. “In this harsh economic climate, it’s often difficult to find gainful employment, which also aligns with our ideals. This is especially pertinent in engineering, a profession with the power to do so much harm and so much good.”

For third-year chemical engineering student Sami Khan, LOT has been instrumental in fostering presentation, public speaking and other so-called soft skills. “Through workshops on conflict resolution, group facilitation, self-leadership and others included in the certificate program, I have improved my performance as a team player,” Khan

told *Engineering Dimensions*. “Moreover, I have learned skills on cross-cultural communication and inclusivity, thus making me flexible to work with people from diverse backgrounds. These skills, developed by LOT, form part of the transformational change in an engineering student towards becoming a professional in future.”

Program leaders are gratified with the growth of the program. During the fall 2008 semester, LOT offered 72 events and training opportunities for nearly 4000 student contacts throughout the faculty, representing a sizable increase over the previous year, which saw 58 events and 1556 student contacts.

Not only are more engineering undergraduates tuning in to the leadership program, but some participants intend to take leadership to the next level.

Paul Kishimoto, an engineering science graduate now enrolled in a master’s degree program, is working with a student editorial board to produce an online engineering leadership journal (lot.utoronto.ca/wiki/Publication).

As well, LOT participant Judith Lau has joined forces with other students in developing Citizen Engineer (citizenengineer.skule.ca), an informal organization dedicated to emphasizing the engineering-public policy link.

Although Citizen Engineer has a different emphasis than LOT, Lau sees a strong connection between LOT and an engineering graduate’s public policy interest.

“The activities LOT holds are well advertised, by both print material and through faculty members,” Lau says. “So the students are naturally thinking more about the community and about leadership, simply due to exposure. I suppose that exposure can lead to curiosity, exploration and knowledge, which is why students are becoming aware of needing to do more community-minded and leadership activities.”

The Cannon: 'LoT Certificate Program'

The following article was published by the October 2009 issue of *The Cannon*, an Engineering student newsletter. The piece was written by LOT's work-study student Anastasia Shteyn. The online version can be found at: <http://cannon.skule.ca/online/200910/lot.html>.

Anastasia Shteyn
Cannon Staff Writer

On Wednesday, September 23rd, the International Student Centre became a gathering place for twenty-eight engineers who were selected to participate in the second Leaders of Tomorrow co-curricular certificate program "Leading from Inside-Out". They met for the session entitled "Stepping into Your Power", the first in the series of five workshops on self-leadership. The program's ultimate goal is to guide students through a process of creating authentic visions about participants' personal leadership paths.

Annie Simpson, the Student Leadership Development Coordinator at the University of Toronto, is facilitating the program, which she co-created with Emily Reed, the former Student Leadership Curriculum Specialist.

After brief introductions it became clear that participants came from all across the Faculty, but shared a genuine interest in increasing self-awareness, pursuing congruent living and envisioning their long-term goals. As the first point on the agenda of the evening, Ms. Simpson invited students to let go of the school week distress and to participate in a trust-building activity. Curiously, it was through non-verbal communication exercises that many of the participants planted new friendships. The exercises warmed up the atmosphere in the room that was soon to burst out in a passionate discussion on the matter of developing our potential.

Over pizza and soft drinks, participants contemplated the nature of personal power, its limits and ways of expression. Under facilitators' instructions, students also discovered aspects of their shadow self, a concept developed by the famous psychologist Carl Jung referring to unrealized parts of ourselves. Participants then engaged in a role-playing activity aimed at expressing their 'shadows'. The evening was concluded by participants' reflections and closing thoughts.

The program focuses on revealing leadership nuances by taking a personal perspective and is running throughout October. The upcoming sessions include "Embracing Challenge", "Living on Purpose", "Envisioning your Future" and, finally, "Sharing Your Vision".

October 2009

The Cannon: 'Leadership Training Day'

The following article was published by the December 2009 issue of *The Cannon*, an Engineering student newsletter. The piece was written by LOT's work-study student Anastasia Shteyn. The online version can be found at: <http://cannon.skule.ca/online/200912/leadershiptraining.html>.

Anastasia Shteyn
Cannon Staff Writer

If you peeked into the windows of the International Student Centre at 10am on Saturday, November 14, you would have spotted a room full of engineers. If you watched them closely for a few minutes, you would have probably deduced that they were actually awake. Was it the nutritious breakfast and the coffee (graciously supplied by the Leaders of Tomorrow program) that kept the students robust? Perhaps, the food had something to do with it. But more importantly, the crowd was intrigued by Ellie Avishai's catching energy, as she opened the Leadership Training Day with a session entitled "Discovering Your Leadership Style."

"Discovering Your Leadership Style" generated a lively discussion of participants' memorable teamwork experiences. Ms. Avishai, a specialist in leadership training and community outreach, helped students identify their personal communication styles. The facilitator also emphasized the importance of being aware of leadership style differences and nuances while working in a team.

The second point on the agenda of the day was "Getting Your Message Across," an interactive workshop with The Second City Theatre Company. The participants were asked to suspend their judgment of themselves and to step out of their comfort zone into the world of improvisation. Through a series of role playing activities, students practiced their active listening and communication skills. The workshop, together with Ellie Avishai's session, was aimed at preparing the participants for the afternoon team challenge of "Dragon's Den," organized by the Leaders of Tomorrow cross-faculty group.

For the contest, students worked in teams with case studies and developed effective solutions for sensitive issues like international development, energy conservation and health care. They also presented their analysis, rationale and recommendations to the panel of judges. After the presentations, the judges gave constructive feedback and announced the winners. The organizers of "Dragon's Den" were Natalia Lizon, Andy Chan, Rehanna Devraj-Kizuk, Sabrina Tang, Vivian Hui, Jason Sukhram, Shahed Al-Haque, and Jigdel Kuyee from the Leaders of Tomorrow crossfaculty group, and Nadia Haider from DECA.

That Saturday, if you peeked into the windows of the International Student Centre later in the afternoon at 4pm, you would have recognized a room full of engineering students. Just like in the morning, they would be discussing their team experiences. This time, they would be sharing reflections and insights from their morning and their afternoon.

December 2009

Appendix J: Dean's Task Force Report Excerpt

The following is a reproduction of the 'Summary and Recommendation' section of the Final Report from the Dean's Task Force on Engineering Leadership Education. The full report can be read online at:

http://www.engineering.utoronto.ca/About/deans_office/Task_Forces_Reports.htm.

Summary and Recommendation of the Task Force on Engineering Leadership Education

Dean Cristina Amon established the Task Force on Engineering Leadership Education in the Faculty of Applied Science and Engineering in October 2009. The Task Force was to review the advances made by the Engineering Leaders of Tomorrow (LOT) program and develop strategic options for the future.

There is a need to prepare engineering students to address increasingly complex global challenges.

Engineering students have tremendous potential, and given opportunities to develop themselves as leaders, that potential would be increased. The world needs engineers who can balance the opportunities of their organizations with the limits of the planet, engineers who can mobilize others towards a common good, and engineers who can communicate their technical knowledge in ways that empower others. It is apparent that engineers are under-represented in the top leadership posts in politics and the corporate and social sectors. As demonstrated at MIT, Penn State, Tufts and other prestigious American engineering schools, there is a movement to deliver leadership education that empowers engineers to fulfill their goals and have greater impact in the world.

The University of Toronto Engineering Leaders of Tomorrow (LOT) program is the first of its kind in Canada. LOT has successfully engaged students from across all the undergraduate and graduate Engineering programs through curricular courses, co-curricular certificate programs and extensive extra-curricular offerings. LOT began in 2002 in the Department of Chemical Engineering and Applied Chemistry. In 2005-06 there were 39 events in Chemical Engineering and just over 800 student contacts. In 2006 funding was granted by the Provostial Academic Initiative Fund (AIF) and the program was expanded to be offered Faculty-wide. The program has grown tremendously since; in 2008-09, participation reached 8400 student contacts at 199 events. It is worthy of note that LOT has been praised by alumni donors and generously supported by donors who have committed over \$2 million towards LOT scholarships, awards, and programming. Now that LOT has been in operation for eight years in Chemical Engineering and four years across the Faculty, the next stage in engineering leadership education at UofT would provide an opportunity to reach more students and have deeper impact. Beginning the next stage calls for a process of reflection and program and curriculum planning.

Leadership learning begins with individuals coming to know themselves, their values, their strengths and weaknesses, their talents and their passions. Self-knowledge increases personal capability, which is further enhanced through the creation of a personal vision of the future, growth in emotional intelligence, and the ability to make decisions that are congruent with personal values. The second level of development involves relational leadership where students grow as collaborators and team members, learn how to effectively communicate, resolve conflict and become astute in team dynamics. This level of skill empowers students to inspire others and to build strong teams and groups. The third level of development is organizational leadership, which manifests itself in organizations of all types, including businesses, institutions, governmental and non-governmental entities. This level of leadership includes creating organizational vision, setting direction, embracing ambiguity, reconciling organizational aspirations and constraints, and empowering others to achieve the vision. The last level of development, societal leadership, involves creating change beyond the organization. Leading in society requires understanding the issues of the day and acting as citizens and catalysts of change. Individuals that participate in political change, contribute to social movements and deeply engage citizens demonstrate societal leadership. Programming at these four levels will enhance engineering education and empower our graduates to contribute at a higher level.

Teaching leadership has special challenges. Some would argue that it cannot be taught, that it must be learned, through experience, and they are not wholly wrong. It cannot be taught by lecture alone; it requires a number of different strategies to engage students in a number of ways: intellectual, social, psychological and emotional, and with a number of formats, such as: experiential workshops, design laboratories, team projects, field excursions, mentoring, coaching, guided reflection, service learning, discussion tutorials, and visioning exercises. Paraphrasing Kolb and Fry, the learning process is a cycle consisting of conceptualization/abstraction moving to active experimentation moving to concrete experience moving to reflective observation and completing the cycle by moving back to conceptualization; the student starts the process at any point in the cycle.

The Task Force recommends the creation of the “Institute for Leadership Education in Engineering” (ILead). The Institute vision statement we propose is: “Engineers leading change to build a better world”. The Institute would be the first of its kind in the Canadian engineering landscape, and would position University of Toronto Engineering to lead the way in empowering engineering students to succeed as leaders in their profession and beyond. The Institute would create a recognizable hub for student leadership education activities and programming, and for faculty who seek to teach, and conduct research on, engineering leadership. The Institute would create visibility with funders for supporting engineering leadership education. It would promote the building of resources and recognition of engineering leadership theory and practice at the University of Toronto and beyond. The function of the Institute is threefold: teaching, research and outreach in the realm of engineering leadership development. The Institute would provide focus and resources for a proposed leadership curriculum planning committee. Co-curricular and extra-curricular leadership development activities would continue to be led by the Engineering Leaders of Tomorrow program operating under the umbrella of the Institute. The Institute will facilitate research and scholarly work on leadership pedagogy and engage with others around the world doing this kind of work. There is much to be done in presenting the concepts and the opportunities of engineering leadership education outside the Faculty, to alumni, to the profession more broadly and to engineering schools across the country. UofT Engineering is first in Canada in this field and has much to contribute.

Recommendation and Motion for Faculty Council:

That the Faculty establishes the Institute for Leadership Education in Engineering with the mandate to:

- a) Provide and facilitate curricular, co-curricular and extra-curricular leadership development programming.
- b) Engage in research on engineering leadership education.
- c) Incorporate the ongoing functions of Engineering Leaders of Tomorrow.
- d) Be an Extra-Departmental Unit – C (EDU-C) reporting to the Dean.