

# Tuks Engineering Leadership Academy (TUKSELA) 2014

'Engineers design and build things (and maintain them, and solve problems) to meet the needs of customers, beneficiaries and ultimately society. These tasks can only be accomplished by the concerted action of many people aligned and rallied by effective leadership'

**MIT Engineering Programme: Capabilities of Effective Engineering Leaders**



It is a fact that engineers spend nearly two-thirds of their time interacting with people in one form or another. The ability to interact well with people separates the highly effective engineer from the mundane one. The soft people skills, known broadly as leadership skills are an indispensable part of the successful engineer's life. But many engineers pretend that it's not important and does not affect them. Sadly they couldn't be more wrong.

Engineers are rational and logical thinkers immersed in the 'hard' data of technology. They often perceive people issues as secondary and distracting. They would rather not get involved with the intangible issues of human behaviour not realising that so-called 'soft' issues can be extremely 'hard' to deal with and could be the difference between success and failure on a particular project or situation.

Organisations are living systems. Together with the formal visible aspects of the organisation there is an informal hidden part where attitudes, perceptions, group norms and interpersonal conflicts abound. It needs leadership to unlock these 'soft' issues and deal with them appropriately if the 'hard' technical part is to succeed. Engineers avoid or marginalise the people issues at their peril! Remember that often an engineer is employed for his hard skills but fired for his soft skills, or lack thereof.

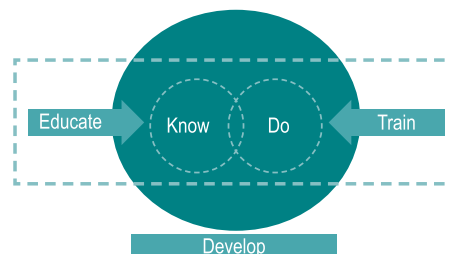
## What is TUKSELA?

The TUKS Engineering Leadership Academy (TUKSELA) targets the development of interpersonal and intrapersonal skills which forms the basis of leadership. The first academy was successfully implemented by the Department of Mining Engineering in 2013 and is now available to all engineering students.

Two courses are being offered in 2014, one called SELA (Saturdays) sponsored by SASOL for their bursars, and the other called MELA (Thursdays) primarily arranged for the mining engineers. However a few places are available on both programmes for other interested senior undergraduates or Hons. students. We would welcome their participation in either one of the programmes.

## Objectives and outcomes

The main objective of TUKSELA is to equip young graduates with some basic leadership skills to augment their technical education and acumen. This results in a well-rounded engineer able to integrate the 'soft' issues with the 'hard' ones.



The trifold model from the U.S. Army's officer course and adopted by the Harvard Business School will be used to accomplish development and growth in students in the following ways:

**Knowing:** Lectures given by people experienced in leadership development. Participants will also be exposed to literature, case studies and simulations on leadership

**Doing:** Presentations, group exercises and other interpersonal work

**Being:** Psychometric assessments, case and reflection papers, discussions and coaching (groups, one-on-one) will be used to help participants in understanding the self and the vital role this plays in leadership skills.

## Develop yourself

- Delve into the heart of the basic drivers of human behavior and learn to identify and manage the hidden dynamics of your own behavior and that of groups/teams.
- The programme will greatly increase your ability to adapt to the work environment and to manage the people issues including your own that affect your performance and consequently the company's performance.
- The programme provides the missing link between technical knowledge and successful implementation of this knowledge through the use of people as individuals and in groups. It adds a dimension to the young engineer's toolbox which he needs when exposed to the rigours and reality of the workplace.
- Emotional intelligence is a powerful determinant of leadership success. You will learn to read the signs of intrapersonal and interpersonal constructs which are promoting or inhibiting your leadership approach.
- TUKSELA introduces a healthy blend of theory and practice.
- Change is ever present in organisations and leaderships skills are stretched to the utmost in designing and implementing any change initiative.

## Reflect Expand Explore

During the programme you will be immersed in the dynamics of intrapersonal (yourself) and interpersonal (others) matters. You will be encouraged to reflect on your own behavior and of your interaction with others. Leadership of the self will be critically examined and how this identity affects your ability to function optimally as a leader.

You will be encouraged and assisted to examine yourself in the fundamental areas of self-awareness and self-esteem which together gives you a self-perception and ultimately an identity. This identity through reflection and inspiration can be changed to make your behavior in relationships with other people more effective.

The personal feedback you receive from the facilitators and your own team of peers (which will vary periodically) will contribute to the process of developing and fine tuning your skills.

The TUKSELA classroom experience and experiential opportunities is designed to be a safe space in which you can engage in experimentation and expansion.

While the programme will teach you about interpersonal relationships you will learn a great deal about yourself. Without exploring the self, the ability to lead successful teams of people is inhibited.

## Programme for 2014

	Contact times	In between modules
Introduction	<b>Module 1</b> Three psychometric assessments; discussion on need for non-technical skills. Groups formed.	Group work case study discussion session and coaching session.
Intrapersonal	<b>Module 2</b> Thinking preferences. Full day at Team Building Institute (TBI) Outcomes: Understanding the four quadrants of thinking preferences, your own and others.	Group work case study discussion session and coaching session.
	Individual reflection	
	<b>Module 3</b> Habits for success. Visiting lecturer. Outcomes: Understanding the significance of habits/behaviour.	Group work case study – discussion session and coaching session.
	Individual reflection	
	<b>Module 4</b> Emotional and social intelligence. Visiting lecturer. Outcomes: Understanding the role that emotions play in your associates' lives.	Group work: New groups case study discussion session and coaching session.
Intrepersonal	Individual reflection	
	<b>Module 5</b> Presentation skills. Visiting facilitators from Speech and Drama. Outcomes: Improving your presentation and other oral skills.	Group work case study for presentation, discussion session and coaching session.
	Individual reflection	
	<b>Module 6</b> Career readiness and employability. Interview skills. Entrepreneurship. Visiting lecturer. Outcomes: Personal career planning.	Group work case study discussion session and coaching session.
	Individual reflection	
	<b>Module 7</b> Discussion on group functioning. Visiting lecturer. Outcomes: How effective groups function, particularly their handling of conflict.	Group work: New groups discussion session and coaching session.
	Individual reflection	
	<b>Module 8 (finale)</b> A simulation exercise on 'FRACKING' Outcomes: Hands-on experience of debating and negotiating in multifarious topical issues.	
Farewell Brunch Gifts and certificates		

## Preliminary Dates for TUKSELA groups

### SELA (Saturday programme)

	Date	Venue	Time
Module 1	22 Feb: Opening	Eng 3 auditorium and entertainment area	7:30 – 12:00
Module 2	1 March	Team Building Institute (TBI)	7:30 – 19:00
Module 3	12 April	Graduate Centre	7:30 – 13:00
Module 4	24 May	Graduate Centre	7:30 – 13:00
Module 5	26 July (full day)	Graduate Centre	7:30 – 16:00
Module 6	30 Aug	Graduate Centre	7:30 – 13:00
Module 7	13 Sept	Graduate Centre	7:30 – 13:00
Module 8	18 Oct	Graduate Centre	7:30 – 13:00
Module 9	1 Nov	Exhibition Space: Eng 1	9:00 – 12:00

### MELA (Thursday programme)

	Date	Venue	Time
Module 1	22 Feb: Opening	Eng 3 auditorium and entertainment area	7:30 – 12:00
Module 2	27 Feb (full day)	Team Building Institute (TBI)	7:30 – 19:00
Module 3	20 March	Graduate Centre	7:30 – 13:00
Module 4	10 April	Graduate Centre	7:30 – 16:00
Module 5	23 Jul (full day)	Graduate Centre	7:30 – 19:00
Module 6	27 Aug	Graduate Centre	7:30 – 13:00
Module 7	15 Sep	Graduate Centre	7:30 – 13:00
Module 8	15 Oct	Graduate Centre	7:30 – 13:00
Module 9	1 Nov	Exhibition Space: Eng 1	9:00 – 12:00

## Feedback from participants in 2013

- The skills part and the assessments were extremely helpful both in understanding myself and in understanding others. It has improved the way I interact with others.
- It has been a fantastic experience. It has made me more aware of how I react in situations and how to deal (more effectively) with these situations.
- The course is extremely useful and I know that many engineering students could benefit from the skills and perspectives presented.
- I would definitely recommend this course to all engineering students.
- I'm keen to try and apply what I have learned in my first year as an employee.
- I usually enjoy working alone but this course has shown me how working with others also helps to some extent.
- The course really helped me to improve my people skills and also presentation skills.
- I found out things concerning my personality which I had not previously known or could not explain.
- I enjoyed the group interactions as well as the coaching sessions. I enjoyed learning how to interact with people who think differently than I do.
- This course really helped me to understand where I should focus in my career.

## FAQ's

### Why do engineers need to know about leadership and people skills?

At some stage or another you will be called upon to work in a team or even manage a team. Your personal effectiveness in these situations will largely be determined by how you interact with colleagues. In turn your ability to interact optimally will be governed by how well you know yourself. The Leadership Academy will go a long way to help you with both the intrapersonal and interpersonal aspects of effective leadership.

### What do other engineering schools do in leadership education?

In the last few years engineering schools have come to realise the importance of education in soft skills and developing leadership. All the Ivy League engineering schools in the USA and many others now offer courses in leadership development. Some Australian universities have been quick to follow suit.

### How will the Leadership Academy help me in my career? What's in it for me?

Firstly the education in the Leadership Academy will help you make the difficult adjustment from university to the 'real' world. Self-confidence, self-awareness and self-esteem will have been enhanced enabling you to not only make a seamless entry into the workplace but also give you an early advantage when interacting with people, especially when you are promoted into a supervisory capacity.

### How much time will I have to devote to the Leadership Academy?

The programme is designed to take up no more than 50 contact hours, half in classroom work and half experiential in small groups (with and without a facilitator as coach).

### How will TUKSELA affect my engineering studies?

The effect should be minimal and if there are clashes then clearly your engineering courses will take precedence and leadership matters will be rescheduled.

### What recognition will I receive?

You will receive a Certificate of Attendance. This certificate will be a useful addition to your fledgling CV.

### Will this cost me anything?

TUKSELA is an expensive course to run considering the costs of psychometric instruments, visiting lecturers and catering. More as a token of your commitment to the course than making a significant contribution to the costs we ask each participant for R 500 payable at the start of the course.

**It's never too late to be what you might have been.**

George Elliot

**Leadership and life-long learning are indispensable to each other.**

John F. Kennedy

**The only real training for leadership is leadership.**

Antony Jay

**As you pass from the tender years of youth into harsh and embittered manhood, make sure you take with you on your journey, all the human emotions! Don't leave them on the road for you will not pick them up afterwards.**

Nikolai Gogol

**An army of a thousand is easy to find, but, ah, how difficult to find a general.**

Chinese proverb



## Faculty Team



**Clive Knobbs** is a senior lecturer in the Department of Mining Engineering at the University of Pretoria (UP). He is a former CEO, and chairman of Harmony Gold Mining Company Ltd. He has held a number of executive and non-executive directorships in other companies. He was president of the Chamber of Mines on two occasions. He has been teaching management and leadership at UP for the past 5 years.

He holds a BSc Engineering degree from the University of the Witwatersrand, and an MBL and BCom (Industrial Psychology) from UNISA. He attended an Executive Development Programme at the Harvard Business School and was recently awarded a diploma in Clinical Organizational Psychology by INSEAD a prestigious business school in France.

His passion is to pass on his extensive experience in management and leadership in developing young undergraduate engineers, and in preparing them more adequately for the transition from student to employee. He views his work at UP as a 'payback' to inspire future leaders after his many years in senior positions in industry.



**Erna Gerrits** is a psychologist, coach and mentor in the Department of Mining Engineering at UP. She holds a B Mus (Hons) in Piano didactics and a master's degree in Educational Psychology. She has a deep passion for working with students. She administers the psychometric assessments used in the management and leadership programme in the Department of Mining Engineering. She advises and guides students following personal development programmes (PDP) derived from one or more of the assessments. She is intimately involved in the Peer Mentorship Programme launched in 2012 in the department. Her passion is the development and growth of young people and helping them fulfill their potential and aspirations.

