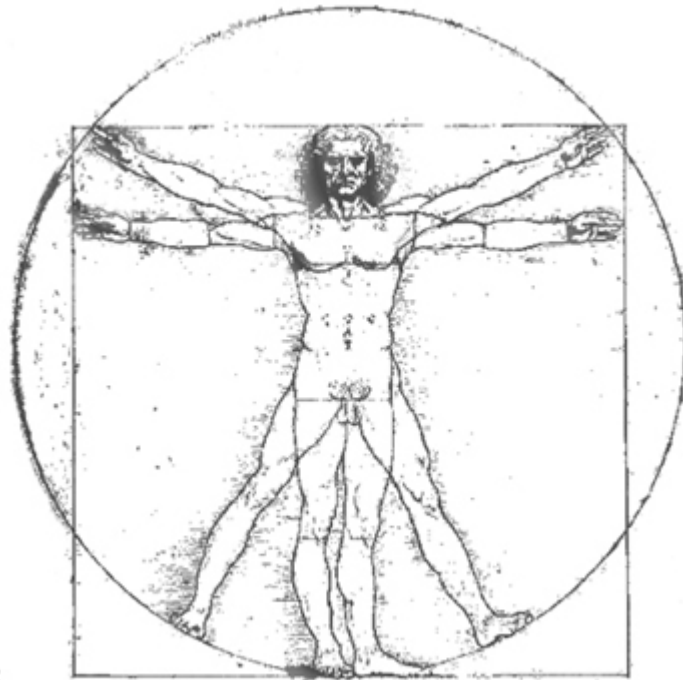




WESTERN ENGINEERING "ENGAGING THE FUTURE"



**OUR RENEWED ACADEMIC PLAN
AND BLUEPRINT FOR EXCELLENCE**

EXECUTIVE SUMMARY

(October 2006)



Executive Summary

The 2002 Academic Plan for the Faculty of Engineering at The University of Western Ontario (Western Engineering) emphasized the desire to become a sustainable Faculty, through a focus on excellence partnered with a period of unprecedented growth in strategic areas. Fundraising and research expenditure successes, together with necessary budget adjustments in areas of priority, supported new and renovated infrastructure and enabled an expansion in faculty, staff and graduate student populations with a planned stabilization of undergraduate enrolment (following the historic “double-cohort year” of 2003/04). The foundation has been successfully laid for Western Engineering to take the next steps towards realistically fulfilling its aspirations:

“To become one of the leading Canadian research-intensive Engineering schools, internationally recognized for the excellence and impact of its undergraduate and graduate education and research and for providing students with the best possible student experience, by focusing on:

- top quality and enriched undergraduate programs (Western Engineering Plus), and*
- qualitative and quantitative expansion of graduate education and research activities”.*

The Renewed Academic Plan (October 2006), “*Western Engineering - Engaging the Future*” considers external factors, such as anticipated and evolving societal and political influences on the Faculty and on the profession of Engineering, as well as internal priorities as captured through “Engaging the Future”, the Draft Report of the Task Force on Strategic Planning at The University of Western Ontario (June 2006). Most importantly, through extensive consultation with stakeholders, it captures the ambitions of the people associated with Western Engineering.

Western Engineering sits adjacent to the most prominent Canadian engineering schools. There is a limited pool of qualified applicants to engineering emerging from Ontario’s secondary school system. Competing with such established programs would take enormous resources and given the market edge these established schools have, would meet, at best, with limited success. Instead, Western Engineering has decided to establish its own market niche. We want to be an engineering school recognized for educating the next generation of Canada’s most promising creative thinkers and societal leaders, and for producing high impact, internationally recognized research excellence in our chosen areas of priority.

To accomplish this, the Renewed Academic Plan outlines these areas of priority. In each section, our aspirations are described and goals are established. In this way, the Faculty commits to clearly identifying a variety of complementary quality indicators of performance and to continuously measure the progress towards our aspirations.

Enhancing the Undergraduate Student Experience: Western Engineering wishes to educate the new generation of engineering graduates that, in addition to becoming professional engineers and undertaking technical careers, will also have aspiration of becoming leaders in business and in the community, managers, physicians, lawyers, bankers, researchers, scientists, politicians, economists, writers, architects and artists. We do this by cautiously capping enrolment, admitting only high quality students, and through the enhancement of existing, and development new, student initiatives, all designed to enhance student opportunity and experience through an initiative we call “Western Engineering Plus”.

Graduate Expansion and the Graduate Student Experience: Student numbers represent a condition that is necessary but not sufficient. What is necessary is to ensure the best quality of

students and programs. We believe an optimal graduate student to faculty member ratio for a research intensive engineering school is 6:1. We are at 5.66. Further growth is possible in selected areas with the addition of new faculty members. Undergraduate students may wish to take advantage of the opportunity to specialize with a one-year Masters degree, and efforts are underway to create high-demand signature MEng programs. With further faculty recruitment and maturity of our young faculty members, we also anticipate a proportional expansion in the research graduate student population.

Building the Research Intensive Faculty of Engineering: To validate the quality of our research and to generate essential resources for unconstrained, creative and visionary research, a critical aspect of the future success of the Faculty will be the ability to maximize the matching of industry funds with corresponding peer-reviewed government programs. Multi-disciplinary research groups will be preferentially supported, as we believe that they will carry the critical mass necessary to achieve international recognition. In addition to traditional measures of scholarly productivity, the Faculty plans to emphasize the importance of knowledge transfer through successes in technology transfer, contract research, and commercialization of research discoveries.

Internationalization: Western Engineering embraces efforts to develop international partnerships, realizing that such collaborations positively impact our ability to: a) deliver top graduate programs; b) offer undergraduate first-hand experiences applying engineering techniques to benefit developing countries, and; c) facilitate research expansion and scholarly advancement to the highest level.

Faculty Recruitment and Retention: Our minimum critical mass for a vibrant research-intensive Faculty of Engineering, offering the best student experience is represented by 100 excellent faculty members, 600 high quality graduate students and 1200 high quality undergraduate students. We are seeking a minimum of 8 new faculty positions over the next 4 years to build upon 11 identified areas of strength and strategic relevance. Faculties of Engineering have to become increasingly competitive to attract and retain the best. Massive recruitment efforts from Western Canada engineering schools will put a huge strain on the system; therefore Western Engineering will need to take proactive and aggressive measures in the area of recruitment and retention.

Commitments to Staff and a Supportive Workplace: Staff recruitment efforts will target the areas of priority for the Faculty, linked to enhancing student experience and enabling appropriate graduate expansion. Staff members most satisfied with their jobs are those who see their contributions linked to the academic mission. Therefore, a key initiative will be to ensure that all staff members understand the importance of their role to the Faculty and University. Communications in general, both internal to Western Engineering and beyond, remain a high priority. We have defined our ambitions, now we need to communicate these in conjunction with our measures of success.

Women in Engineering: Women account for 11% of Western Engineering's faculty and approximately 16.4% and 20% of the undergraduate and graduate student populations, respectively. Western Engineering supports the targeted recruitment of women to the profession. We have had considerable success through the NSERC University Faculty Award (UFA) program and look to continue with such initiatives. Outreach targeting school age girls has met with much public support. It has been documented that women tend to favour careers where there are direct benefits to society and individuals in society. We have begun to market engineering as a caring profession, with several of our areas of priority fitting within this theme.

Alumni Engagement and Institutional Advancement: Several factors lead us to believe we will witness increasing support of our initiatives through alumni contributions. Western Engineering is a young Faculty that, in the past, had a fairly small student population. Furthermore, recent graduating student surveys are showing the increasing satisfaction of our students with their post-secondary education. Our students are now connecting with alumni, experiencing first-hand the benefits alumni engagement can bring to the educational mission. A culture of giving back is being established.

Governance and Organizational Structure: While the 2002 Academic Plan directed the Faculty's unprecedented growth and the current Plan proposes the means to aggressively develop a niche for Western Engineering in the market, business processes need to be continually monitored and modified to support ambitions in a workplace facing increased public accountability and legislated responsibility.

Our Physical Infrastructure: The Faculty of Engineering gratefully acknowledges The University, government and many donors who made the complement expansion and drive for excellence possible by providing facilities to support the growth. Further expansion at any level requires additional appropriate space and on-going updates of existing infrastructure. Space is again the limiting factor influencing our future growth and we are planning our next phase of space expansion.

Information Technology: Western Engineering is renewing its Information Technology strategy in order to offer enhancement to the educational experience and support the teaching, administrative and research efforts of faculty and staff. Successful undergraduate and graduate engineering programs require our full commitment to being responsive in utilizing progressive IT technologies, including distance education.

Embracing the University's efforts towards public investment and accountability, each of these areas of priority will be regularly reviewed and monitored. We will benchmark progress, providing full accountability for our actions. As required, strategies and directions will be modified and updated to provide greatest returns for the investment into Western Engineering.

The Renewed Academic Plan (October 2006), "*Western Engineering - Engaging the Future*" outlines the path to meet the collective goals of excellence in teaching, research and in overall Faculty operation. We are no longer satisfied of being a smaller version of other Canadian engineering schools. Through this document, we are proposing that Western Engineering will carve its own niche of recognized excellence in the market. We define that niche and outline measurable goals to achieve our vision by 2010.