



Strategic Academic Plan Engaging the Future - Update 2011 - 2014



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EXECUTIVE SUMMARY

THE NEXT DECADE IS AN IMPORTANT PERIOD FOR WESTERN ENGINEERING, BRINGING BOTH EXCITING OPPORTUNITIES AND SIGNIFICANT CHALLENGES. COUNTRIES AROUND THE WORLD SEEK THE SOLUTIONS OF ENGINEERS TO ADDRESS IMPORTANT ISSUES SUCH AS THE EFFECTS OF AN AGING POPULATION, IMPROVING HEALTH AND ENVIRONMENT, AND FINDING SUSTAINABLE SOLUTIONS TO OUR NEEDS FOR WATER, ENERGY, AND INFRASTRUCTURE.

It is through exceptional undergraduate teaching and internationally recognized research that Western Engineering will prepare leaders to engage and address these issues in industry, government and academia around the world.

Our overall mission is to become one of the leading Canadian research-intensive Engineering schools, internationally recognized for the excellence and impact of its research and for providing students with high quality enriched undergraduate and graduate programs.

Our key goal in undergraduate studies is to prepare our students to become global minded leaders by expanding related curriculum offerings, internationalization activities, and enriched education outside the classroom.

Western Engineering is proud to offer an undergraduate program that is more than a traditional engineering degree. We offer students *Western Engineering Plus* - a diverse array of opportunities including a common first year, nine engineering programs, plus dual degrees with the Richard Ivey School of Business, Schulich School of Medicine & Dentistry, and Western Law, in addition to concurrent degree programs with other Faculties across campus. Students can also gain real-world knowledge with opportunities such as co-op and internship, Accelerated Master's programs, international exchanges, plus numerous leadership opportunities.

In 2010, Western Engineering ranked among the top schools in Canada in the *Globe and Mail's Canadian University Report for Engineering and Technology*. We are proud to offer students the best engineering student experience in Canada and are committed to continuing this success by increasing numbers of, and opportunities for, women in engineering, more hands-on experiences, and research opportunities at the undergraduate level.

Our effort to offer the best engineering student experience in Canada does not stop at the undergraduate level. We are also committed to maintaining the highest quality and standards for graduate studies and research excellence. We will continue to look for partnerships with industry, international institutions and government agencies. This will provide us the fundamental and practical knowledge to further our understanding, disseminate new knowledge through peer-reviewed publications, and develop competitive strategies for supporting commercialization.

Achieving research excellence is core to the academic aspirations of our Faculty and to develop our external relations. We are proud to support the academic freedom of our individual faculty members to pursue research in the sector of their choice. We currently have strengths in areas varying from biomedical engineering to fluid mechanics to information engineering.

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Western Engineering is internationally recognized for wind engineering, with over 45 years of individual faculty expertise, groups and projects such as the Boundary Layer Wind Tunnel Laboratory (BLWTL), Insurance Research Lab for Better Homes and the new Wind, Engineering, Energy and Environment (WindEEE) research project and facility.

With escalating concerns about climate change and the need for green technologies, Western Engineering is focusing efforts on building a sustainable future with specializations in water engineering, environmental remediation, nanotechnology, natural disasters mitigation and management, power systems, biofuels and alternative energy systems. Research groups and institutes focusing on these areas include Western's Power Systems Engineering Group, Particle Technology Research Centre (PTRC), Chemical Reactor Engineering Centre (CREC), Geotechnical Research Centre (GRC), Research for Subsurface Transport and Remediation (RESTORE), and the Institute for Chemicals and Fuels from Alternative Resources (ICFAR), just to name a few.

Our faculty, staff and students continuously work towards building a better world. In the next five to ten years we look forward to expanding our work in this regard by creating unique facilities to house our leading-edge research at locations such as the Advanced Manufacturing Park, where we have already developed plans for WindEEE and the Composites Research Centre.

In order to be successful in any of these areas we must connect Western Engineering with the world and bring the world to Western. Our impact in strategically important areas must be at an international level to maintain our abilities to recruit the best students and faculty members from around the globe.

To achieve success in this regard we will focus our recruitment efforts on bringing the best international undergraduate and graduate students to Western Engineering and promote more faculty visits by prominent international academics and industry leaders. We will also encourage, and support, our current faculty and students to pursue international exchanges and research collaborations with institutions around the world.

Our goals are ambitious, but achievable, as long as we continue to foster a respectful workplace for our faculty and staff - who are the core strength in our creative and educational endeavors and service.

Together, as a collegial team, we will work towards expanding the use of information technology in e-learning, effective communication, and technology delivery to meet the ever-evolving technological needs and services. We will also work together to build on current relationships with industry, alumni and friends, while fostering new partnerships to better serve our faculty, staff, students and community.

Western Engineering is a medium-size Faculty with an ambitious drive to become a leading Canadian research-intensive engineering school. To learn more about our full strategic academic plan contact us at ContactWE@eng.uwo.ca.