

MEET the Future – Sheridan’s centre for advanced manufacturing and design technologies poised to help fuel SME growth

Centre of expertise emerges as a resource for mechanical engineering innovation in the GTA



Recently ranked the number one college in Ontario for applied research by Research InfoSource, Sheridan College is rapidly emerging as a leader in supporting both industry innovation and practical student learning through undergraduate applied research projects.

As Sheridan transitions towards becoming an undergraduate teaching university, its Centre for Manufacturing and Design Technologies (CAMDT) at the Davis Campus in Brampton is already a leading example of involving students in research projects with industry clients that are directly aligned with their chosen fields of study. Undergraduate applied research is a key pillar in Sheridan’s proposed model for a teaching university focused on offering an education grounded in creativity with a purpose across all disciplines.

CAMDT is maintained by Sheridan’s school of mechanical and electrical engineering and technology. The Centre is focused on enhancing engineering education as it prepares the next generation of professionals in the advanced manufacturing, automation, robotics and sustainable energy sectors. The 18,000-square-foot facility, constructed in 2007, houses state-of-the-art labs and a flexible automation and fabrication centre. The facility expanded in 2012 by an additional 10,000 square feet with the opening of the Product Innovation Centre, which brought the most advanced 3D

printing system on the market to Sheridan.

CAMDT’s mission is to help bridge a critical skills gap in the manufacturing sector, and meet the current and future needs of local manufacturers in order to stimulate economic development. The Centre helps produce highly qualified graduates who work capably with the advanced technology being used by manufacturers to increase productivity.

Over the past five years, CAMDT has collaborated with local small- and medium-sized enterprises to conduct applied research. The successful projects have enhanced Sheridan’s reputation as a respected community partner in manufacturing and helped clients succeed through the creative thinking process.

“Having our students delve into real business projects helps them to understand the design challenges that manufacturing businesses face on a daily basis,” said Dr. Farzad Rayegani, associate dean at the school of mechanical and electrical engineering technology. “It also gives them hands-on experience in developing innovative and practical solutions which puts them in high demand upon graduation.”

In the fall 2013 term, student research projects conducted as part of final courses included an automatic paper cutting machine for Jancox Stamping, a plug insertion station for Corma Inc., and a scanner mounting system for gaming company Sulon Technologies.

Sheridan is also committed to further strengthening its engineering education curriculum by moving beyond traditional education models. Earlier this year, Sheridan gained membership into a prestigious group of over 100 universities worldwide who share a passion to reinvent engineering education. Stanford, MIT, Harvard and now Sheridan are all adhering to this new CDIO model that teaches students to conceive, design, implement and operate rather than solely focus on the important fundamentals of math and science that underpin engineering. 

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