



CAMDT: Welcome to Sheridan's Technology Playground for Advanced Manufacturing

When a child sees a playground, there are no limits to their imagination and no boundaries as to what can be accomplished. That's the reaction industry partners often have when they first visit the technology playground of Sheridan College's Centre for Advanced Manufacturing and Design Technologies (CAMDT) in Brampton, ON.

Research and industry training activities at CAMDT are overseen by the Sheridan Multidisciplinary Applied Research Team (SMART), a research group encompassing faculty members from the School of Engineering. These applied research and consulting projects can take the form of a three-to four-month, curriculum-based (capstone) project, or a project that is funded through federal, provincial or municipal governments and can extend from six months to several years. In CAMDT's 28,000- square-foot manufacturing facility, small-and medium sized enterprises (SMEs) can collaborate with Sheridan's teams of students, faculty researchers and technologists to develop innovative solutions that can have a significant impact on their business in a matter of months.

Mission: To produce highly qualified graduates who will meet the current and future needs of the manufacturing sector, and to provide local SMEs access to advanced manufacturing expertise and state-of-the-art resources.

Research Areas: Additive manufacturing (3D printing) and rapid prototyping; sustainable energy systems; plant layout/efficiency; robotics and automation systems

Facilities

- Integrated Energy Systems Laboratory (IESL) provides students with opportunities to experiment and initiate applied research in emerging areas such as energy systems, on-demand renewable electricity production, and distributed energy generation.
- CAMDT – Cimatrix Product Innovation Centre features state-of-the-art additive manufacturing equipment provided by Cimatrix. Local SMEs can learn how to best leverage additive manufacturing to support their product development initiatives by producing advanced prototypes, manufacturing tools and even final end-use parts.
- CAMDT – ABB Robotics Centre, featuring 18 robots provided by ABB with capabilities including: welding; picking, packing and palletizing; machine tending, material handling and product assembly; and advanced vision-related programming.
- CAMDT - Siemens Mechatronics Lab supports the Mechatronics Systems Certification Program (SMSCP), a comprehensive industry skills certification. A central theme in the SMSCP is the System Approach, a special set of teaching and learning methods developed over 25 years in Siemens' technical schools in Germany.

CAMDT Stats:

- 23: Percentage of the labour force in Brampton, Ontario that works in advanced manufacturing
- 28,000: Square feet of space available at CAMDT for R&D projects
- \$10 million: Investments to date from Sheridan, the City of Brampton, the Ontario Ministry of Economic Development and Trade and industry to support CAMDT's sustainability
- \$490,000: Amount received in federal and provincial funding for applied research
- 70: Number of CAMDT private-sector partnerships since 2012
- 1,500: Number of students that learn about CAMDT's equipment every year

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