

NGen, Humber Polytechnic, and Festo Didactic Showcase Canadian Skills at Hannover Messe 2025

NGen, Canada's advanced manufacturing global innovation network, Festo Didactic, a leading provider of technical education equipment and solutions, and Humber Polytechnic, a leading Canadian post-secondary institution known for its career-focused, hands-on approach to education, are partnering to demonstrate the strength of Canadian mechatronics skills at Hannover Messe. This collaboration will feature a skills competition showcasing top students from leading Canadian post-secondary institutions including Humber Polytechnic, Southern Alberta Institute of Technology (SAIT), and Conestoga College

"Mechatronics skills are highly sought-after by employers across various industries globally including automation, robotics, and advanced manufacturing," said Peter Wawrow, Director of Workforce Development Programs at NGen. "This competition is an opportunity to showcase the exceptional talent that Canada and Germany have to offer, and to highlight the importance of investing in workforce development."

The skills competition will feature four teams of two competitors. There will be three teams from Canada and one team from Germany. These institutions were selected for their strong mechatronics programs and history of producing highly skilled graduates. Humber Polytechnic, led by Director Neal Mohammed, has participated in Canada's Skills Provincial, National, and International mechatronics competitions, and over the last two decades, has won 47 medals, 29 gold, 14 silver, and 4 bronze.

"Mechatronics is such a high-demand skill set. Every industry needs these skills to keep their operations maintained and competitive. Employers are coming to Humber before our students graduate months in advance to hire them," said Neal Mohammed, Director of the Barrett Centre for Technology Innovation at Humber Polytechnic. "Canada has the capacity to prepare and train students with the right skills, and we are demonstrating it through the Hannover Messe event," Director Mohammed added.

The competition challenge, focused on an automotive theme, will require students to design and build an assembly line to sort vehicles by colour and deliver them to specific locations, mimicking real-world scenarios in "just-in-time" manufacturing.

In addition to the competition, NGen will host a panel discussion featuring leaders from the three Canadian participating schools, team Germany, and Festo to discuss the importance of mechatronics education and workforce development.

The Mechatronics Competition

Canada Pavilion Hall 7 D28

The four teams representing Canada and Germany will participate over five days at the mechatronics competition. Each day will consist of a different application build where competitors will be challenged to solve a realistic industry challenge. Problem-solving and

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systems integration skills are an essential part of the competition and will require competitors to be proficient in system-level thinking, troubleshooting and diagnostics, system building, and optimization.

The goal of the competition is to provide students with the opportunity to demonstrate the skills and knowledge that every technician must have in the field of Industrial Automation and Control Technology. The competitors will be presented with an industrial challenge which they will need to build an automated system and demonstrate their skills in automation, mechanical building, electrical wiring, troubleshooting, logical problem solving, speed execution, PLC programming, and professional practice under a time frame. Teams of two need to demonstrate their ability to integrate these disciplines into a cohesive, efficient, and innovative solution that can solve complex industrial problems. Effective communication, logical thinking, and real-time adaptation to challenges are crucial for success in such competitions. The ability to design, build, test, and refine a system under time pressure is a key element of this competition, making both technical expertise and teamwork essential for success.

“We want to showcase the skills that we have coming from Canada, and the skills needed for advanced manufacturing careers,” said Greg James, Head of Sales at Festo Didactic Canada. “The systems used in the competition are scalable mechatronic systems that mimic industrial standards. Students will be tasked with solving an industry problem by building an automated manufacturing system using Festo Didactic components.”

Participants will be tasked with building a mechatronics system using Festo Didactic’s Modular Production System. The MPS system challenges students to assemble, integrate, and program components to create an automated system that’s capable of completing a specific task. Programming is done via PLC coding.

The teams will compete using the same [MPS systems](#) and applications used in the 2024 WorldSkills Competition. Festo Didactic has provided state-of-the-art learning systems for SkillsUSA and WorldSkills mechatronics competitions around the world since 1991.

Festo Exhibit Booth Features

Hall 7, Stand A32

Visit [Festo’s exhibit booth](#) to explore innovative learning systems that provide industry-approved education and training for advanced manufacturing and Industry 4.0 careers.

NGen Panel Session, “Career Pathways Through Mechatronics Competitions”

Date: Wednesday, April 2, 2025

Time: 4:00 pm

Room: Hall 7 Canada Stage

For questions or more information, contact Peter Wawrow at peter.wawrow@ngen.ca

Please also visit us in the Canada Pavilion in Hall 7 D28.

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About Next Generation Manufacturing Canada (NGen)

NGen is the industry-led not-for-profit organization that leads Canada's Global Innovation Cluster for Advanced Manufacturing. Its mandate is to help build world-leading advanced manufacturing capabilities for the benefit of Canadians. NGen works to strengthen collaboration among its membership of more than 9,000 manufacturers, technology companies, innovation centres, and researchers, and provides funding and business support to industry-led initiatives that aim to develop, apply, or scale-up transformative manufacturing solutions in Canada for commercialization in global markets. www.ngen.ca/membership

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