



2012 Nova Scotia Skills Competition

Official Competition Name: **Mechatronics**

Competition Level: **Post Secondary**

Competition Location: **NSCC – Waterfront Campus, Mechatronics Research Lab W3713**

Competition Date: **April 5, 2011**

Purpose of Challenge:

By team of two participants

Open to Electro-Mechanical, Electrical, Electronics and Mechanical Engineering Technologies sectors.

By means of a practical exercise, measure certain skills that every technician must acquire in the field of industrial control and automation.

Number of Stations:

The competition is based on tasks performed on Festo's MPS stations, with same tasks given to each team.

Specific spots allotted to Campuses and Apprentices:

School/Campus/Apprentice	Number of available spots
Akerley Campus	
Annapolis Valley Campus	
Burridge Campus	
Cumberland Campus	
Halifax Campus	
Waterfront Campus	3
Kingstec Campus	1
Lunenburg Campus	
Marconi Campus	1
Pictou Campus	1
Shelburne Campus	
Strait Area Campus	
Truro Campus	
Apprentices	
Universities	
Private Career Colleges	

Skills and knowledge to be tested:

- Interpreting and using electronic and pneumatic schematics, and mechanical drawings.
- Rendering operational and modifying sequential mechanisms that have a programmable logic controller.
- Commissioning electrical, pneumatic and mechanical systems.
- Troubleshooting.
- Executing tasks correctly and as fast as possible.

Prerequisites:

- Understanding of electronic and pneumatic diagrams, circuits and components.
- PLC programming knowledge, including editing software and PC to PLC communications.
- Troubleshooting techniques.
- Developing and using Sequential Function Charts or other PLC programming protocols.

Equipment, tools, supplies, clothing:

Equipment and tools (supplied by Competition Organizers)

- Workstations from Festo.
- Pneumatic Tubing and Cutters.
- Wires.
- Tie wraps.

Equipment and tools (supplied by Participants)

- Multimeter (V.O.M.).
- Various screwdrivers.
- Set of ALLEN metric keys.
- Set of open metric keys.
- Metric or adjustable wrenches.
- Wire strippers, wire cutters and pliers.
- PLC board and programming tools*.

*PLC board must be pre-wired with two Syslink cables and 24 VDC power supply.

Point Breakdown:

Assembling
Programming
Hardware and Software Modification
Troubleshooting

Technical Committee Member and Judges:

Kelly Tompkins, Nova Scotia Community College, NTC Atlantic Region.

Rakesh Dhokia, Festo Inc.