

CERTIFICATE

- Red Seal Certificate
- One year
- September start
- Burin, Gander and Seal Cove Campuses

COURSES

CODE	TITLE	Hrs
Block 1	Entry Level	
TS1510	Occupational Health and Safety	6
TS1530	Standard First Aid	14
TS1520	WHMIS	6
ER1110	Hand Tools	15
ER1120	Power Tools	30
ER1130	Fasteners & Adhesives	15
ER1140	Direct Current (DC) Theory	30
ER1150	Series & Parallel Circuits	45
ER1160	Codes	30
ER1170	Voltage Drop & Power Loss	30
ER1180	Single-Phase Theory	60
ER1190	Three-Phase Theory	30
ER1200	Blueprint (Generic)	30
ER1225	Conduit, Tubing & Fittings	15
ER1710	Signal Transmission	30
ER1732	Electronics	135
ER1760	Motors	45
ER2156	Process Measurement	300
ER2215	Pneumatic Systems Instrument Air Supply	30
AP1100	Introduction to Apprenticeship	15
CM2150	Workplace Communications	45
MR1220	Customer Service	30
SP2330	Quality Assurance/Quality Control	30
MC1050	Introduction to Computers	30
SD1700	Workplace Skills	30
SD1710	Job Search Techniques	15
SD1720	Entrepreneurial Awareness	15
Block 2	Advanced Level	
ER1740	On-Off Control	60
ER2196	Process Control	135
Block 3	Advanced Level	
ER2160	Solid State Drives	30
ER2170	PLC Fundamentals	15
ER2180	Programming PLC's	30
ER2226	Control Valves	60
ER2235	Hydraulic Systems	30
ER2325	Boiler Control	30
Block 4	Advanced Level	
ER1770	Process Analyzers	60
ER1780	DCS Process Applications	45
ER1790	PLC Process Applications	45
ER2116	Troubleshooting Techniques	6
ER2200	Distributed Control Systems	30
ER2380	Vibration	15

INDUSTRIAL TRADES

Instrumentation and Control Technician

Instrumentation involves automation in the production of various commodities. Complex process control and measurement systems such as those found in the oil and gas industry, chemical plants, food processing operations, and the pulp and paper industry require sensitive and accurate instruments. The technician repairs, maintains, calibrates, adjusts and installs Industrial measuring and controlling instrumentation. This instrumentation makes sure that all machines in a plant are safe and running correctly. They may regulate the water flow in equipment or check the air quality in a mine. The operation and safety of the plant relies on these instruments so your role is very important as you would constantly monitor and calibrate these instruments. Duties of a technician are: consulting manuals, reading and interpreting circuit diagrams, blueprints and schematics, inspecting and testing the operation of Instruments and systems to diagnose faults using testing devices, writing maintenance reports, repairing and adjusting system components or removing and replacing defective parts, calibrating components and instruments, performing scheduled preventative maintenance work, installing control and measurement instruments on existing or new plant equipment and observing safety in accordance with government and company standards. The work environment is usually indoors, in a sometimes noisy and cramped environment. You should have good communication skills, an interest in and aptitude for math, chemistry and physics, and have the ability to visualize three-dimensional objects from two-dimensional drawings.

OUTCOMES

1. Demonstrate safe work practices and personal protection.
2. Utilize drawings, codes, standards and government regulations.
3. Utilize tools and measuring equipment.
4. Facilitate new installations.
5. Maintain analyzers.
6. Maintain various types of field mounted equipment.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School

High School Graduation

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate

3. Adult Basic Education

Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:

- i. Mathematics MA3107A, MA3107B, MA3107C
- ii. Science 3101, 3102, 3103

4. Mature Student Status

Applicants who do not meet the educational prerequisites, are 19 years of age or older and have been out of school for at least one year, may be considered on an individual basis under the Mature Student Clause.

EMPLOYMENT OPPORTUNITIES

With industry becoming increasingly automated, instrument technicians are needed virtually anywhere there are control and metering systems. They are employed in the following industries:

- Pulp and Paper Processing
- Hydro Power Generation
- Mining, Petrochemical, and Natural Gas
- Industrial and Commercial Manufacturing
- Industrial Construction
- Industrial Instrument Servicing

