**INSTRUMENTATION AND CONTROL ENGINEERING (ICET)**

The **Training Elements** of a student in Instrumentation and Control Engineering Technology major entering co-op program in a company should include some or all of the following:

1. **Company Profile**
* Overview of the company’s production/manufacturing facilities and the job role of an instrumentation technician within this structure.
* Safety rules and regulations.
1. **Maintenance Section**
* Overhauling, assembly and disassembly of instrumentation and control systems (sensors, transducers, final control elements) within the company.
* Maintenance, repair and calibration of Electronic (Analogue & Digital) instruments.
* PM cycle and measures in place for failure on critical equipment.
* Maintenance, repair, calibration and PM on transmitters, final control elements, etc.
1. **Instrumentation Section**
* Troubleshooting and repair of monitoring and control equipment for on-line processes by using PID and sequence-diagrams (techniques and strategies).
* Familiarization of any control structures (control loops) and their operation in the process (including controllers, final control elements, transmitters).
* Monitoring instruments/equipment in operations for daily plant operation.
* Familiarization with centralized control facilities and their operations.
* Familiarization with PLC, DCS, SCADA, etc.
1. **Installation/Project Section**
* Receiving the equipment and arranging them as needed in the plant by P&ID diagrams loops/area.
* Calibrating/testing/verifying sensors/transmitters/valves/controllers/final control elements as per required loop.
* Installing equipment as per given loop-specifications.
* Wiring equipment as per given diagrams

Commissioning/running equipment.