## Certificate in Industrial Control System (ICS)

### Program Overview

This course introduces various programmable logic controllers and how each interfaces with hydraulic, pneumatic and electrical controls for automated applications. Laboratory experiences include the design and troubleshooting of ladder logic programs, working with counters, registers, decoders, and digital to analog converters, analog to digital converters, and storage devices. The latest programmable logic controllers from the leaders in the industry will be used as the processors for control applications, rung programming, sequencers, data manipulation instruction, file-to-file moves and graphics. Communications between the processors on the same platforms will be over a Data Network that is selective to each PLC manufacturer. The course concludes with an individual student project involving the programmable logic controller and electro-mechanical control of an industrial application.

### Certificate Requirements

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| **Introduction Elements**<br><br>**ICS-1** | Programmable Logic Controllers |
| **Problem Solving Element**<br><br>**ICS-2** | Motors and Control |
| **Advanced Concepts & Technology**<br><br>**ICS-3** | Advanced PLC |