

AUTOMATION BASICS

eLearning courses designed to increase productivity and profits



Learning made Simple, Visual, and Interactive

Automation Basics consists of sections that will help familiarize the learner with the rudimentary concepts associated with sensors, actuators, the various types of controllers, and human machine interfaces that are used with automation systems. Presented in THORS's graphically rich and interactive learning format, this course will help employees identify various components and products that can commonly be seen within an automation system.

Credit Hours 1.5

Learning Objectives

- Identify the differences between sensors and actuators.
- Differentiate discrete sensors from analog sensors.
- Summarize the various controller types and what processes best suits them.
- Understand what human machine interfaces are and how they have evolved.

Table of Contents

I. Sensors and Actuators

- **Sensors**
 - o Discrete Sensors
 - o Analog Sensors
- **Actuators**

II. Controllers

- **Programmable Logic Controllers**
- **Distributed Control System**
- **Variable Frequency Drive**
- **Servo Motion Controllers**
- **Computer Numeric Controllers**
- **Robot Controllers**
- **Stepper Motion Controllers**

III. Human Machine Interfaces

- **Traditional Operator Interfaces**
- **Traditional Operator Interfaces with Automation**
- **Graphical Operator Interfaces**
- **Advanced Capabilities**

