Performance Based Objectives – Integrated Systems*

PBO No.	Performance Based Objective
ISYS-1	Identify, by physical examination, the sequence of operations of each station of the integrated system.
ISYS-2	Identify the type of technology associated with each action on the integrated systems trainer. (e.g. electrical, pneumatic, etc.)
ISYS-3	Identify each output associated with every step in the sequence of operation on each station on the integrated systems trainer.
ISYS-4	Generate a list of most probable triggering elements associated with each step in the sequence on each station on the integrated systems trainer.
ISYS-14	Given a selected part on the drawings (prints), locate the part on the integrated system.
ISYS-15	Given a part on the integrated system, locate the part on the drawings (prints).
ISYS-5	Compare the PLC inputs and outputs associated with each real world input and output with the working drawings of the integrated systems trainer.
ISYS-6	Generate a Sequence diagram of each station on the trainer reflecting: The step, timing, output actuating, and most probable triggers causing the action.
ISYS-7	Given the Status of an operator's complaint, all I/O indicators (including blown fuse indicators) and the processor logic, identify a faulted part. Given a copy of the logic as it would appear on a programming terminal, and a drawing depicting the physical layout of the machine with all indicators reflecting the state of the machine and processor status indications.
ISYS-8	Given the Status of an operator's complaint, all I/O Indicators and a sequence Diagram with outputs and triggers identified, Identify the most likely faulted Item(s). Given a drawing depicting the physical layout of the machine with all indicators reflecting the state of the machine and processor status indications.
ISYS-9	Isolate a fault on the integrated system trainer as to the input that is expected/output that is expected for the paused sequence of operation.
ISYS-10	Use the internet to supplement their understanding with unfamiliar technology as it relates to components on the integrated system trainer.
ISYS-11	Generate a flow chart (or List of actions) that reflect the troubleshooting logic used on sequencing machines.
ISYS-12	List the part flow and process flow of the integrated systems trainer.
ISYS-13	Match the following LANS with an example of their function: - Robot and Tooling LAN – Local I/O and Remote I/O (includes names of DeviceNet and ProfiBus) - PLC to PLC LAN - Program Back-up–and- Data Collection LAN - F.I.S. LAN (Factory Information Systems) - Work Scheduling LAN (includes Just in time, etc.)
ISYS-16	Generate a flow chart of a standardized procedure for troubleshooting sequencing machines.

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*** This is an introductory course for students that have no background in this technology and is meant to set the context for all further courses.**
*** The troubleshooting that takes place in this course does not utilize the plc logic but represents 85% of the typical floor issues. Such as Part -in-Place, loose limit switches, etc.**
*** Integrated Systems Level 2 will be instructed after completing the Electrical, Fluid Power, Controls, PLC and Robot Courses. This course will use the capability of the PLC, Robot and HMI to facilitate Troubleshooting**

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