

MANUFACTURING NETWORK CERTIFICATE

WHO WILL BENEFIT FROM THIS TRAINING?

The Manufacturing Network Certificate program prepares industrial and information technology technicians to address networking communications in manufacturing environments with an emphasis in troubleshooting existing systems.

All courses are held on the Southwest Tech campus in Fennimore. For more information about this unique opportunity or to register, contact:

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Cisco Networking for Manufacturing

This course will be comprised of two Cisco curriculum courses—Networking Fundamentals and LAN Switching and Wireless. This course provides an integrated and comprehensive coverage of networking topics, from fundamentals to advanced applications and services, while providing opportunities for hands-on practical experience. **Prerequisites:** Students with advanced problem solving and analytical skills, such as students pursuing degrees in engineering, information technology, math, or science. Students are expected to know binary math and understand the concept of algorithms.

Students who complete Network Fundamentals will be able to attempt their ICND1-CCENT certification exam.

Combined Ethernet Industrial Protocol

This course will provide the learner with an overview of the network planning and process of linking a mix of discrete automated processes in a single fully integrated automation solution. The primary focus of the course will be the role of the PLC in a networked manufacturing and/or process environment, and troubleshooting communication errors. Topics include how an industrial ethernet system operates, network topology including connectors and cabling, messaging and data acquisition via ethernet, and network troubleshooting equipment and processes. **Prerequisite:** PLC Technologies course or instructor permission. Cisco Networking or instructor permission.

Data Highway

This course will provide the learner with an overview of the network planning and process of linking a mix of discrete processes in a single fully integrated automation solution. The primary focus of the course will be the role of the PLC in a networked manufacturing and/or process environment and troubleshooting communication errors. Topics include network protocol, network topology, communication data format, network troubleshooting, and network diagnostics.

DeviceNet

This course will provide the learner with an overview of the network planning and process of linking a mix of discrete processes in a single fully integrated automation solution. The primary focus of the course will be the role of the PLC in a networked manufacturing and/or process environment and troubleshooting communication errors. Topics include DeviceNet communications protocol, network topology, network power calculations, and network troubleshooting.

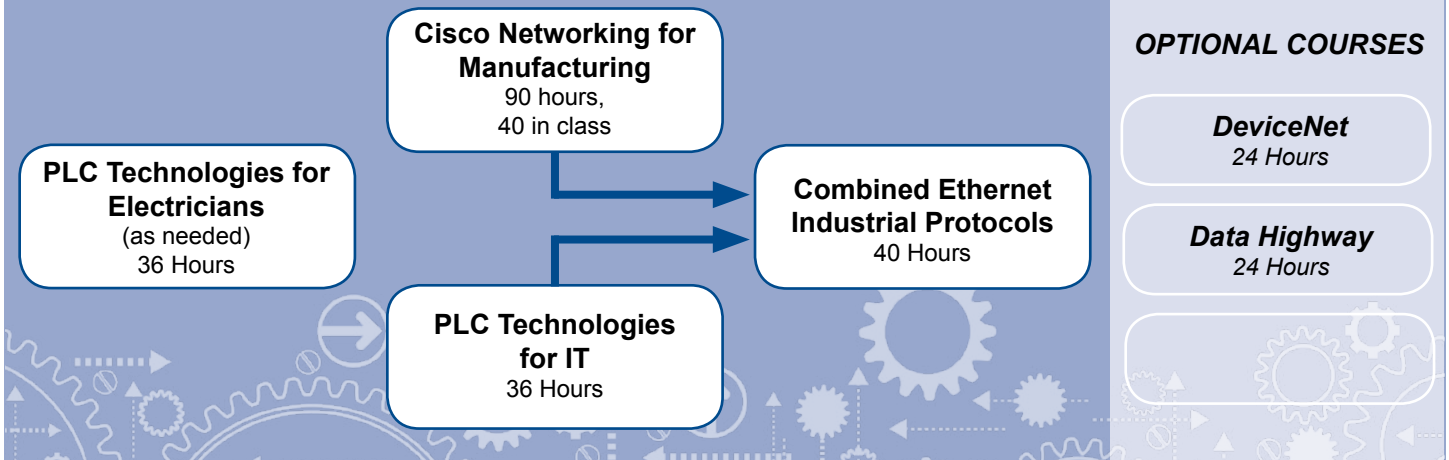
PLC Technologies

Prerequisite for IT personnel, optional for PLC Technicians

Design, program, operate, and troubleshoot discrete input/output PLC functions utilizing Allen Bradley ControlLogix programming software. Investigate data types used in PLC functions for application into networking needs. Topics include fundamentals of PLC logic, PLC programming, program control functions, and process control and data acquisition.

*Please see page 2 for curriculum map and schedule of classes.
This training is funded through a Department of Labor H1B Visa Grant.*

MANUFACTURING NETWORKING CURRICULUM MAP



TRAINING SCHEDULE

Cisco Networking for Manufacturing (Room 201)

Course # 47-150-401 G009

March 9-13, 2015 (M-F)
8:00 a.m. – 4:30 p.m.

Course # 47-150-401 G010

March 6, 7, 20, 21, 27, 2015 (F/S)
8:00 a.m.– 4:30 p.m.

Course # 47-150-401 G011

May 8, 9, 15, 18, 19, 2015 (F/S/M/T)
8:00 a.m.– 4:30 p.m.

Course # 47-150-401 G001

July 14, 16, 20, 28, 30, 2015 (M/T/R)
8:00 a.m.– 4:30 p.m.

Course # 47-150-401 G002

Online - September 2015

PLC Technologies (Room 613/617)

Course # 47-620-409 G014

April 10, 17, 24, May 1, 8, 2015 (F)
8:00 a.m. – 4:30 p.m.

Course # 47-620-409 G001

July 6-10, 2015 (M-F)
8:00 a.m. – 4:30 p.m.

Combined Ethernet Industrial Protocols (Room 613/617)

Course # 47-620-411 G004

March 25, April 1, 8, 15, 22, 2015 (W)
8:00 a.m. – 4:30 p.m.

Course # 47-620-411 G001

September 8, 10, 15, 17, 22, 2015 (T/R)
8:00 a.m.– 4:30 p.m.

Data Highway (Room 613/617)

Course # 47-620-412 G001

August 7, 14, 21, 2015 (F)
8:00 a.m.– 4:30 p.m.

DeviceNet (Room 613/617)

Course # 47-620-412 G003

May 6, 13, 15, 2015 (W/F)
8:00 a.m.– 4:30 p.m.

Additional Notes

Additional courses may be added as needed.

Courses may be canceled due to low enrollment.

Course enrollment - minimum/maximum

*Cisco Networking for Manufacturing min-5/max-18

*PLC Technologies min-3/max-12

*Combined Ethernet Industrial Protocols min-3/max-12

*Data Highway min-3/max-12

*DeviceNet min-3/max-12