
Course Outline: Introduction to Industrial Ethernet

Industrial Ethernet is the backbone of modern industrial communication, providing a high-speed, reliable network for devices and systems to exchange data in real time. It integrates traditional Ethernet technologies with the specific needs of industrial environments, ensuring seamless connectivity across a range of devices, from sensors to controllers. This technology helps streamline processes, improve reliability, and enable predictive maintenance, making it a key enabler of digital transformation in industrial sectors.

Course Information

The Introduction to Industrial Ethernet Course is a one-day, hands-on training program designed to equip individuals with the knowledge to work confidently with industrial Ethernet systems, making them well-equipped to handle the demands of modern industrial networking.

This course provides a comprehensive introduction to Industrial Ethernet, which is crucial for establishing reliable communication in industrial environments. Participants will gain an understanding of the basics of Ethernet, including how it functions and the key differences between standard and industrial networks. The course covers installation considerations, including physical setup, cabling requirements, and network topology to ensure optimal performance and reliability. Security considerations will also be explored to address the increasing risks of cyber threats in industrial networks, equipping attendees with the knowledge to safeguard critical systems.

Throughout the training, common faults and diagnostic mechanisms will be highlighted, providing learners with the skills to identify and troubleshoot issues that may arise in an industrial Ethernet network. Practical exercises will be incorporated to reinforce the theoretical aspects of the course, ensuring participants gain hands-on experience with real-world scenarios. The course concludes with practical exercises, ensuring attendees will have a strong grasp of Ethernet communication.

Course Outline

Day 1

- Introduction to Industrial Ethernet
- Introduction to digital systems
- Ethernet basics
- Installation considerations
- Security considerations
- Common faults and related diagnostics mechanisms
- Practical exercises

Prerequisites

This course covers advanced content. Participants should have a technical qualification, experience working with digital communication systems, and strong proficiency in English.

Who Should Attend This Course

Installers, network engineers, project planners, industrial engineers, maintenance workers, plant employees.

Certification

Upon completion of the course, attendees will be awarded a certificate of attendance.

CPD Points

Students can earn one ECSA-accredited CPD point for this course.

Venue

All courses are conducted at the IDX Academy in Fourways, Johannesburg, South Africa. Onsite training is available upon request, in collaboration with your Safety, Health, Environment, and Quality (SHEQ) team to ensure safe interactions.

Capacity

Given the technical nature of the course, training groups are capped at a maximum of eight participants to ensure a high pass rate.

Course Date and Booking

To book, complete the [application form](#) and email it to academy@idx.co.za. For additional inquiries, contact +27 (11) 548 9960 or visit <https://www.idx.co.za>.