Industrial Data Xchange (Pty) Ltd
1 Weaver Street, Fourways, Johannesburg
T: +27 (0)11 548 9960 | E: info@idx.co.za

Registration Number: 2017/504973/07
Vat Number: 4380197311
Director: D.P.A. Bean

Course Outline: Certified PROFIBUS System Designer

Process Field Bus (PROFIBUS) is the world's leading fieldbus technology, developed by industry experts to connect and control devices within industrial environments. It enables communication between field devices such as sensors, actuators, and controllers, ensuring efficient data exchange across systems. Known for its reliability and scalability, PROFIBUS plays a vital role in optimising industrial processes.

Course Information

The Certified PROFIBUS System Designer Course is a three-day, hands-on training program designed for those looking to design modern PROFIBUS control systems, focusing on minimising the impact of the inevitable control system and network failures throughout a plant's lifecycle.

This course provides a comprehensive understanding of PROFIBUS system architecture, focusing on planning, layout, and environmental considerations for optimal network performance. Participants learn high-level communication methods, including fibre optic and wireless technologies, while exploring PROFIBUS PA integration to design efficient and reliable industrial networks.

Advanced topics include hazardous environment requirements, ProfiDrive profiles, diagnostics, and network monitoring, along with fail-safe design, safety, availability, and timing considerations. The course ends with an internationally recognised certification examination that includes both practical and theoretical components.

Course Outline

Day 1

- Introduction to digital systems
- Digital system operating principles
- Digital system physics
- Introduction to PROFIBUS
- PROFIBUS properties and operation
- PROFIBUS transmission technology
- PROFIBUS DP (RS–485)
- PROFIBUS cabling installation
- PROFIBUS PA
- Putting it all together

Day 2

- Overview
- System architecture
- Environmental considerations
- Planning and layout
- High-level communications
- Fibre optic and wireless
- PROFIBUS PA

Day 3

- Hazardous environments
- ProfiDrive and other profiles
- Diagnostics and network monitoring
- Fail-safe design
- Availability and safety
- Timing requirements
- Drawing and documentation

Day 4

- Tutorial exercises
- Theory examination
- Practical examination

Industrial Data Xchange (Pty) Ltd
1 Weaver Street, Fourways, Johannesburg
T: +27 (0)11 548 9960 | E: info@idx.co.za

Registration Number: 2017/504973/07
Vat Number: 4380197311
Director: D.P.A. Bean

Prerequisites

All students of the Certified PROFIBUS System Designer Course must first complete the Certified PROFIBUS Installer Course.

Who Should Attend This Course

Application engineers, system integrators, technical support/maintenance staff, project leaders, installers, suppliers, automation and control systems staff.

Certification

On the final day of the course, attendees must demonstrate their proficiency by completing an open-book multiple-choice theory test and a practical assessment. Candidates who pass both tests will be registered with PROFIBUS and PROFINET International (PI) as Certified PROFIBUS System Designers. Those who do not pass will have the opportunity to schedule one additional attempt with the IDX Academy.

CPD Points

Students can earn three ECSA-accredited CPD points 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

Click here to view the training schedule. 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.