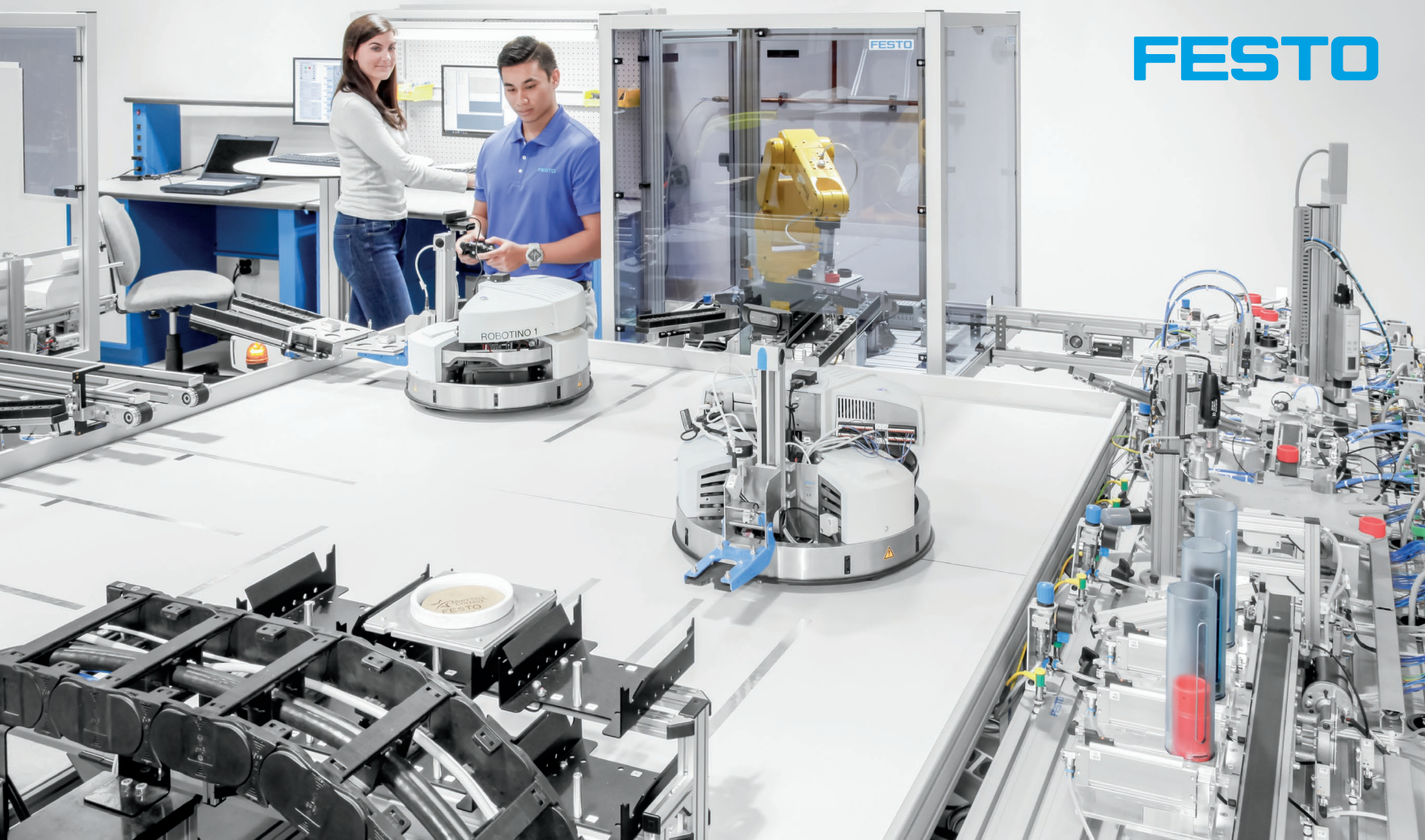


Festo Didactic

Leadership in Technical Education

FESTO





From Industry...

Education drives innovation. Innovation drives the job market.

Upcoming technologies and rapid developments in changing economies create an urgent demand for a skilled workforce in manufacturing. To operate efficiently and to find new high-tech solutions, a skilled workforce needs both practical experience and fundamental knowledge of advanced technologies. Practical experience prepares students to contribute to the productivity of the company.

World-leading provider of equipment and solutions for technical education

As part of the Festo Group, we have first-hand experience and insights into industry demands. This industrial DNA enables us to constantly improve our equipment and service portfolio and to develop training programs that are in step with actual practice. Systems are modular, allowing for expansion and flexibility, making your investment future-proof with no dead-ends.

Our goal is to maximize learning success in educational institutions and industrial companies

At Festo Didactic, we supply educational institutions and companies with learning environments. We place students in real-life situations and enable them to quickly gain practical experience with the latest components and technologies used in manufacturing. Our learning environments cover all relevant technological fields and are complemented by training programs on problem solving, critical thinking and soft skills.

...For Industry



Solutions for competence building

Learning solutions from Festo Didactic are based on a number of related competencies to be achieved. These are derived from respective professional areas of expertise. Educational institutions usually work with defined curriculum and implicit competencies, for which Festo provides corresponding ready-to-use learning environments. Festo can also analyze competence requirements from the local industry and define corresponding programs for competence building.

These programs include on-site consulting, training, as well as equipping the educational institutions. We design and implement learning systems, laboratories, factories, and E-learning solutions for educational programs as well as complete learning centers. Our team of specialists can help you select the right combination of training equipment, curriculum, software and E-learning tools to improve the efficiency and success of your programs. We are here to supply you with everything you need... from a single source.

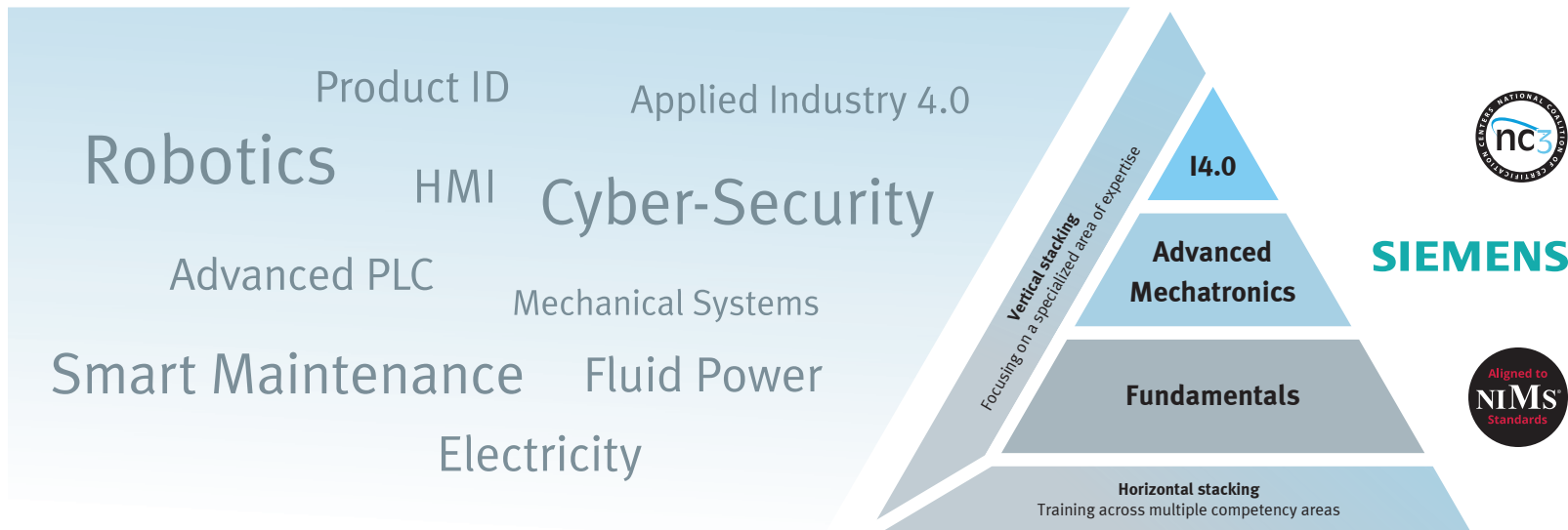
The benefits of our learning environments:

- Balanced didactic content
- Practical experience
- Real-life industrial components
- Intuitive approaches to problem-solving



Industry 4.0 Certification Program

Increasing student employability



Reshaping manufacturing

At Festo Didactic, our mission is to provide industry and education partners with the technology, design, and engineering support needed to develop the workforce of tomorrow. FI4.0CP is a comprehensive certification program developed by industry experts and educators that ensures students have qualifying skills upon completion. We partner with NC3 – the trusted certification accrediting body in the industry – to

ensure students are well-trained and ready for technical careers. We do this by deploying the industry's best trainers, designing a rigorous curriculum, and providing access to simulated smart factory equipment and learning systems. All FI4.0CP certified instructors go through NC3's Train-the-Trainer program and achieve an instructor certification that qualifies them to provide training to students how to operate and maintain sophisticated I4.0 machinery.

Highlights and benefits

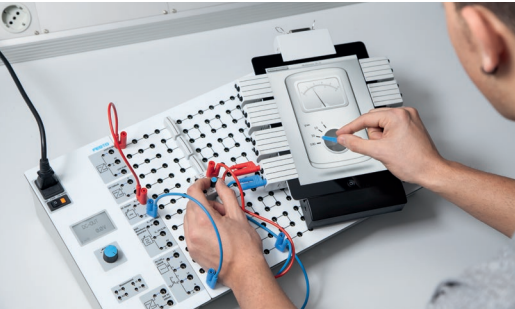
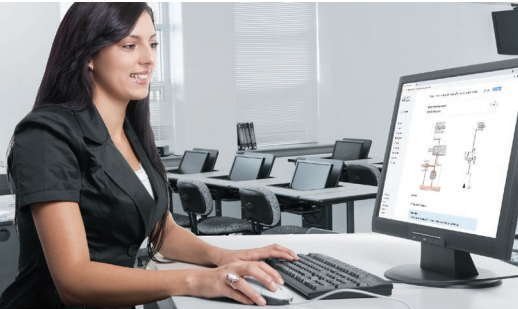
- Allows students to transition into a variety of production, technician and engineering careers in high-tech and advanced manufacturing industries.
- Easily integrates with existing certificate, Associate, and Bachelor degree programs.
- Certified instructors through NC3's Train-the-Trainer program.



Digital Learning

State-of-the-art technical education for the world

Digital learning methods motivate students and ensure lasting learning success.



The rapid introduction to new technology, such as Industry 4.0, feeds global trends towards virtual competencies and life-long learning. To address these trends and ensure success in the workplace, digitalization is making its way into education. Festo is actively driving this development by providing innovative digital solutions to schools, industries and individuals. The digitalization of teaching makes learning more attractive, flexible and efficient.

Our digital learning platforms provide the necessary tools to focus on what's important: delivering engaging lessons, while monitoring student progress to ensure success. Courseware, software, hardware, and curriculum are designed and integrated for students to absorb, apply, repeat, and reflect on what they've learned, at their own pace. This allows instructors the freedom to be creative, increasing student motivation.

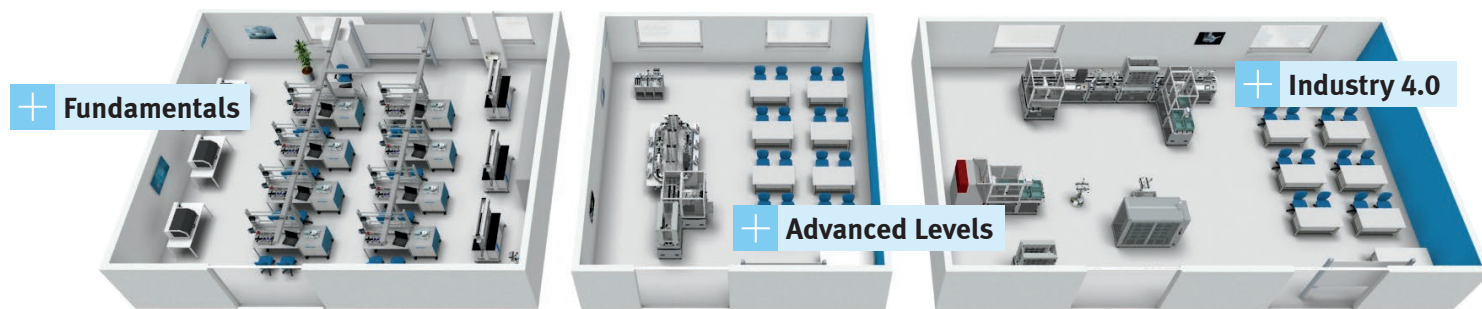
- Highlights and benefits**
- User-friendly tools to maximize learning experience
 - Powerful curriculum customization
 - Manage students, competencies, and equipment from one Learning Management System
 - Track and report individual achievement as students work through the modules



Classroom design and solutions

Turnkey laboratories and workshops for schools, universities and training centers

Your key to success is defining a holistic classroom tailored to your needs and goals.



The planning, designing, and equipping of classrooms and laboratories are essential parts of the solutions provided by Festo Didactic. All laboratories carry a Festo seal of quality indicating compliance with global standards for learning equipment and didactic methods for technical training in industrial automation and mechatronics. We will present you with an individual concept based on the spatial conditions and specific requirements of the location. In doing so, we can

focus on cost-effective and optimal use of space, as well as multi-functional equipment. Using ceiling systems, industrial connectors, and mobile equipment, the room layout can be adapted in just a few minutes. Efficient and versatile use of rooms saves space and cost enabling a high degree of flexibility with virtually unlimited options.

Highlights and benefits

- Professional training equipment with industrial components
- Facility and laboratory planning
- Professional lab design
- Ergonomically designed laboratory and workstations
- Installation and systems integration
- Train-the-Trainer, courseware

Industrial trades



Electric power technology



Process automation



Areas of expertise

Solutions for technical education

Professionals need both basic understanding and hands-on experience of advanced technologies.

Factory automation



Environmental and renewable energy



Telecommunication and radar technology



Fluid power



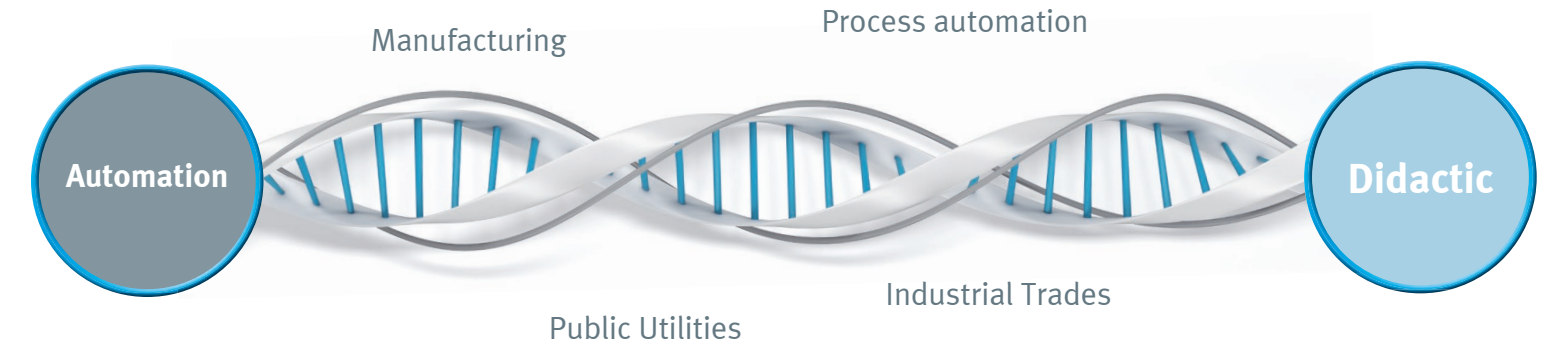
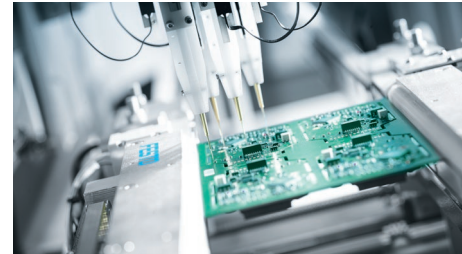
HVAC / Refrigeration



STEM



Electricity and electronics



Festo Didactic has been developing professional, hands-on educational products and services for technical training and professional development for over five decades. That commitment began with pneumatics, a fast-moving discipline in the United States, and expanded rapidly into other areas of automation technology. Today, we offer a broad range of areas of expertise including fluid power, electronics and mechatronics along with sensor technologies, robot-

ics, CNC, and fieldbus technologies. We continue to be at the forefront of innovation by developing Industry 4.0 learning solutions and curriculum. With model factories that approximate industrial conditions, Festo Didactic enables highly efficient learning under real-time conditions, conveying knowledge relevant to the technology and its assembly, programming, maintenance and troubleshooting with a focus on practical applications.

Areas of Expertise

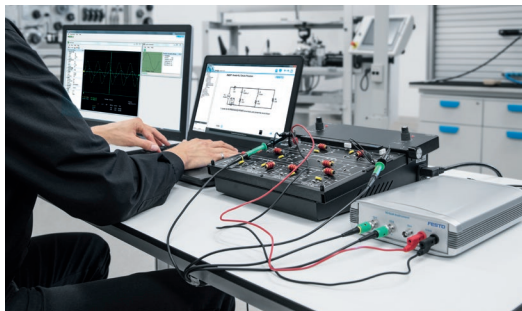
- Electricity and Electronics
- Electric Power Technology
- Industrial Trades
- HVAC/Refrigeration
- Communications and Radar Technology
- Fluid Power
- Process Automation
- Factory Automation/Industry 4.0
- Environmental and Renewable Energy
- Digital Learning Platforms
- STEM



Electricity and Electronics, Electric Power Technology

Power Utilities, Power Grids, Renewable Energy Farms

Knowledge in this field is important for understanding functions and processes in complex systems.



Industrial electronics is a major and growing occupational field, as there are a myriad of electronics applications in industrial and manufacturing processes and equipment. Students and workers need to understand, to varying degrees, electrical principles, electronic circuitry, and components, thus necessitating diverse training requirements. Our programs answer the diversified needs of not only educational institutions but also industrial and utilities companies.

Electricity and electronics train students and employees to design, install, test, maintain, and repair all kinds of electrical and electronic systems. Electrical power energy deals with the generation, transmission and distribution of electricity. The sturdy workstations, modules, and components ensure a prolonged service life in the demanding training laboratory environment and provide user safety, helping maximize learning and experimentation.

Learning Systems

- Exploratory Electricity and Electronics
- AC/DC Training System
- FACET® Training System
- Electric Engineering Learning Systems
- Variable-Frequency Drive Training System
- Industrial Controls Training Systems
- Electromechanical Training Systems
- Data Acquisition and Control Interface
- Protective Relaying
- Dissectible Machines Training System
- Motor Winding Kit
- MagTran® Training System
- Electric Power Technology Training System



Industrial Trades, HVAC / Refrigeration

Construction, Utilities, Building Maintenance, Installations

The current skills gap has left employers confronting a giant obstacle: an under-qualified workforce.

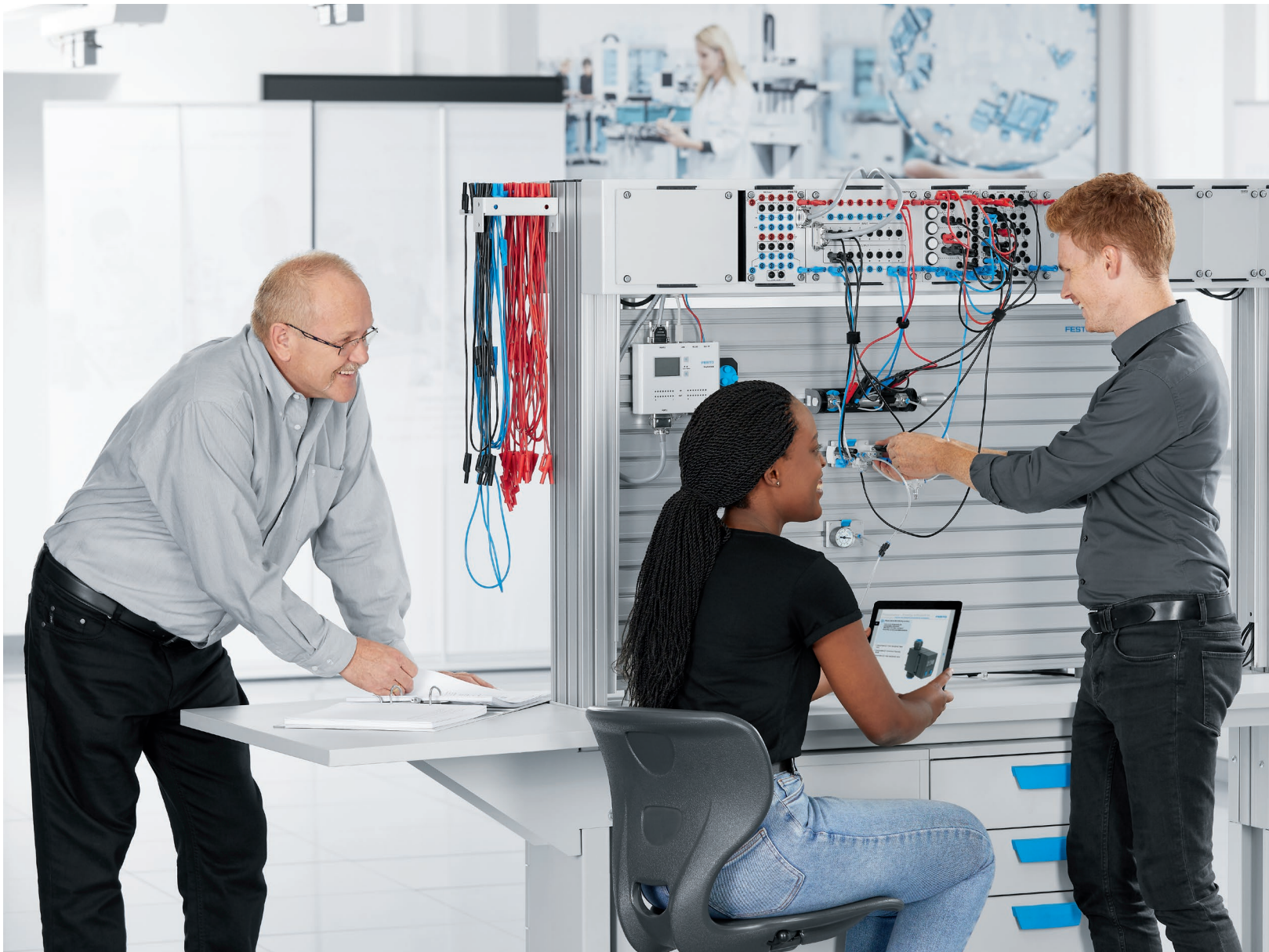


A large segment of the American workforce is disappearing. Despite technological advances and increasing factory automation, many industrial tasks still remain manual and must be performed by resourceful, competent personnel. Developing these skills for hands-on industrial careers is essential in order to close the skills gap we have today. To work efficiently, qualified employees need both practical experience and basic knowledge about leading-edge technology.

Our hands-on training solutions support the development of important skills and abilities required for the installation, maintenance, troubleshooting, and repair in these fields. These systems reflect the standards and technologies used in industry, making it a valuable tool for training students or employees. They are designed to deliver a broad range of fundamental and specialty industrial training to help build a competent, qualified, and efficient workforce.

Learning Systems

- Mechanical
- Industrial Wiring
- Piping
- Pumps
- Rigging
- Industrial Motor Controls
- Refrigeration
- Heat Pumps and AC



Fluid Power

Automotive, Mechanical Power Transmission, Aviation, Manufacturing Production Lines

Demands for specialists in this field are steadily increasing – along with demands for process speed, safety, and efficiency.



Hydraulics and pneumatics are used in a wide spectrum of industrial applications, driving and controlling mechanical motions to accomplish work. Fluid power is closely interconnected with other technologies, such as mechatronics and automation, as hydraulic and pneumatic applications are at the heart of industrial systems. Consequently, a sound understanding of these technologies is a prerequisite for a large number of industry workers. Challenges faced

by engineers and technicians in this fast-growing field are numerous, ranging from improving systems and components efficiency, to increasing reliability, power density, and energy storage capabilities.

Our modular training approach allows instructors to exactly match their needs and requirements, while also providing expansion possibilities.

Learning Systems

- Basic and Advanced Level Training Packages
- Troubleshooting
- Basic and Advanced Level Electro -pneumatics, -hydraulics Training Packages
- Measuring/Control
- Closed-Loop Training Package
- Pneumatics Actuators
- Vacuum Technology
- Safety, Sensors and Digitalization in Pneumatics Training Packages
- Mobile Hydraulics
- Fundamentals of PLC Programming
- FluidSIM® Simulation Software



Process Automation

Chemicals, Pharmaceuticals, Biotechnology, Energy, Water/Wastewater, Oil, Gas, Plastic, Paper, Food, and Beverages

Process automation is a wide and complex field, spreading across several industry segments, thus requiring a large pool of qualified workers



Maintaining variables such as pressure, flow, level, temperature, and pH within a desired range is of utmost importance when manufacturing goods with a predictable composition and quality. There is a seemingly infinite amount to learn about methods, techniques, and technologies used in process measurement and control, all requiring varying degrees of skills and expertise. Industry requirements need personnel to go far beyond fundamental training.

Our in-depth experience in this field, makes us a key player in the process industry, partnering with leading educational, research, and industrial partners. Most of our training equipment integrates industrial and commercial grade components and communication protocols for realistic training. They offer an affordable, relatively compact learning program that can train future workers, update or develop the skills of experienced workers, or support R&D activities.

Learning Systems

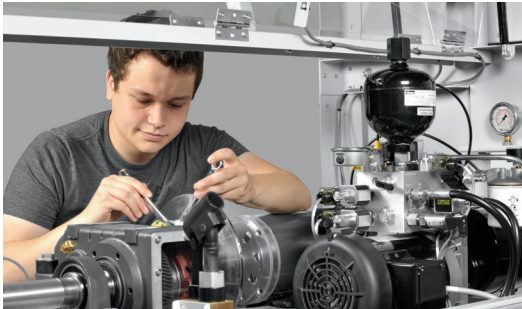
- EduKit PA
- MPS® PA Compact Workstation
- MPS® PA Stations
- Process Control Training Systems
- Air Pressure/Flow Process Training Systems
- pH and Conductivity Process Training Systems
- Pressure, Flow, Level, and Temperature Process Training Systems
- PlantPAx™ Distributed Control System (DCS) Demonstrator - Pressure, Flow, Level, Temperature
- Three-Phase Separator



Environmental and Renewable Energy

Wind Farms, Solar Arrays, Thermal Power, Water Treatment

Technicians and engineers with qualifications in these areas are urgently needed, in both industry and the public sector.



The production of energy using renewable natural resources has gained much importance in recent years as it is an effective means of reducing greenhouse gas (GHG) emissions. These systems are complex and require vigilant operation, as the applications have far-reaching effects on humans and the environment. The need for innovative technologies to make the grid smarter, water cleaner, and technicians to service and maintain these technologies are in demand.

Festo environmental technology and renewable energy training systems re-imagine the traditional approaches to training. We translate theory into hands-on equipment that introduces practical, understandable learning for water management specialists, and wind and solar energy system technicians. Easy and safe to use, these training systems are rugged and durable, and manufactured to the highest quality standards.

Learning Systems

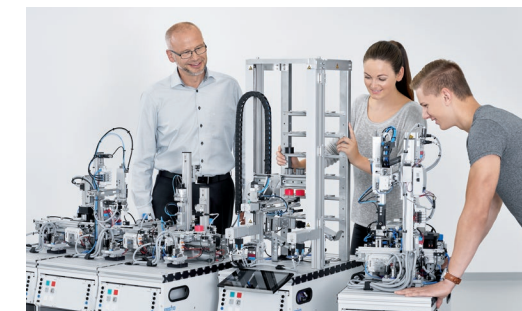
- Solar/Wind Energy Training System
- EDS® Solar Thermal Training System
- EDS® Nacelle - Wind Power Generation Training System
- Pitch Hub Training Systems (Electrical or Hydraulic)
- EDS® Water Management



Qualification for Industry 4.0/Factory Automation

Advanced Manufacturing, Smart Factory, Cyber-Physical Environments, Augmented and Virtual Reality

Advanced trends in production not only affect technical industrial processes, but the people who work in the factories as well.



The manufacturing processes used in factories today are more productive, intelligent and controllable. Industrial processes are based on interoperability, incorporating modern communication and information technologies to improve production process. These advanced trends in production not only affect technical industrial processes, but the people who work in the factories as well. Human-machine collaboration will increase based on data interaction.

All our solutions are modular in structure, providing practical training in the use of new technologies. The learning systems replicate the workstations of a real production facility. This makes it possible to learn how to set up networks and optimize many other aspects such as energy-efficiency and data management. In addition, they can be used to develop and test flexible software solutions prior to their implementation in the production facility.

Learning Systems

- MPS® Modular Production System
- Cyber-Physical Lab
- Cyber-Physical Factory
- AFB Factory (Agricultural/Food/Beverage)
- Robotino® and Robot Systems
- EduTrainer® and PLC Training Systems
- CIROS® 3D Simulation Software



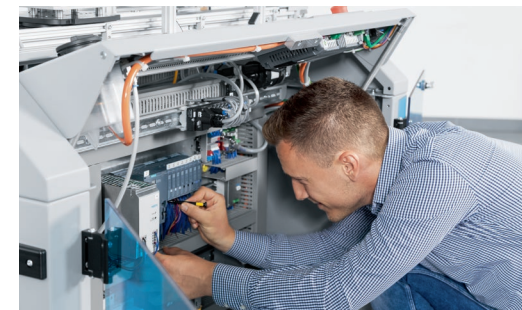
Customized Solutions

Turnkey solutions to maximize your productivity and competitiveness

Only tailored and practical solutions will ensure manufacturing productivity.



Our Solutions Center helps you to define and satisfy your specific requirements, so you can reach your goals, both financial and educational. Together we identify what knowledge and equipment you need, and what you don't. Our many years of knowledge exchange with industry will help you define the exact solution for your situation. As an experienced partner, we offer high quality and efficient educational consulting and implementation to realize your education and



competency development goals. We design and implement holistic solutions that systematically prepare people for work in dynamic and complex industrial environments. We offer complete turnkey solutions and services in a wide range of technologies. Our team will get you started with your choice of products and help you adapt your training programs to market needs, tailored to your requirements and objectives.

Highlights and benefits

- Complete turnkey educational Industry 4.0 laboratory
- Fluid integration of different advanced manufacturing equipment
- Allows schools to customize systems to their local manufacturing industries
- State-of-the-art educational equipment with the latest cutting-edge technologies
- Customized, flexible and cost efficient solutions



Partnerships and Communities

Empowering human talent and creating opportunities.

Education is the basis for progress and a future to thrive for.



Throughout our partnerships we have the opportunity to improve the world we live in. As an integral part of Festo Group, Festo Didactic offers you the power of an experienced and stable partner with expert knowledge in both industry and education markets. Our years of experience in industry and technical education allow us to become thought leaders within many organizations and associations nationwide. Our technical expertise makes us an ideal partner to cre-

ate the most up-to-date education programs. Our portfolio allows our partners to provide a complete turnkey solution creating new opportunities in the communities they serve. Finally, our commitment to reduce the skills gap allows us to partner with many organizations with similar goals and lay the foundation to support young technical talent.

Our vision is to simplify cooperation between education and industry – together with partners – and drive innovation and future technologies.

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