

Technical education

Learning solutions for renewable energy production



The blue path to green skills

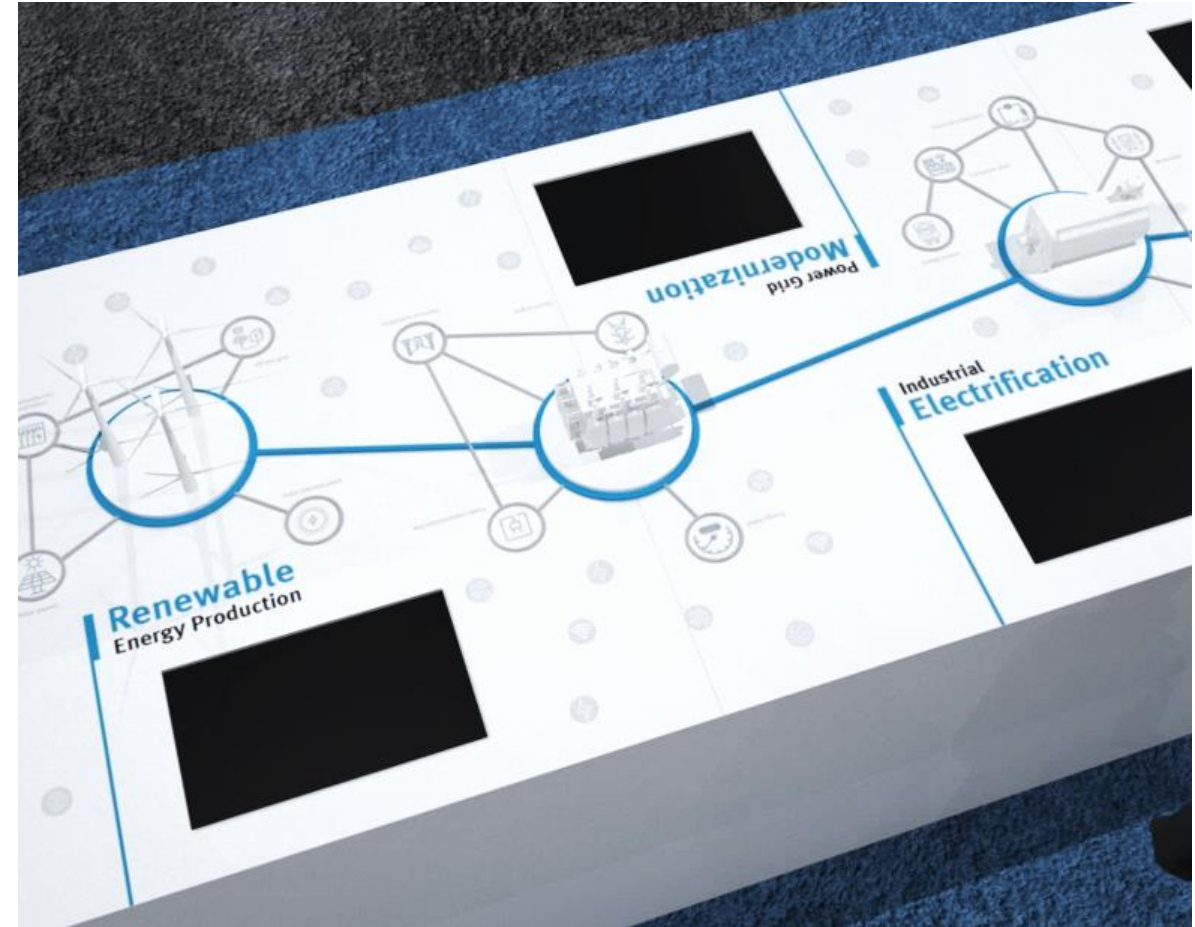
Your way to sustainability training



We're living the fastest energy transition in history.

Our challenge: Meet a rising global energy demand while dealing with climate change.

This requires new ways to produce, distribute, store, and use energy. Hence the switch from fossil fuels to clean energy sources to change the global energy mix to increase renewables' share.

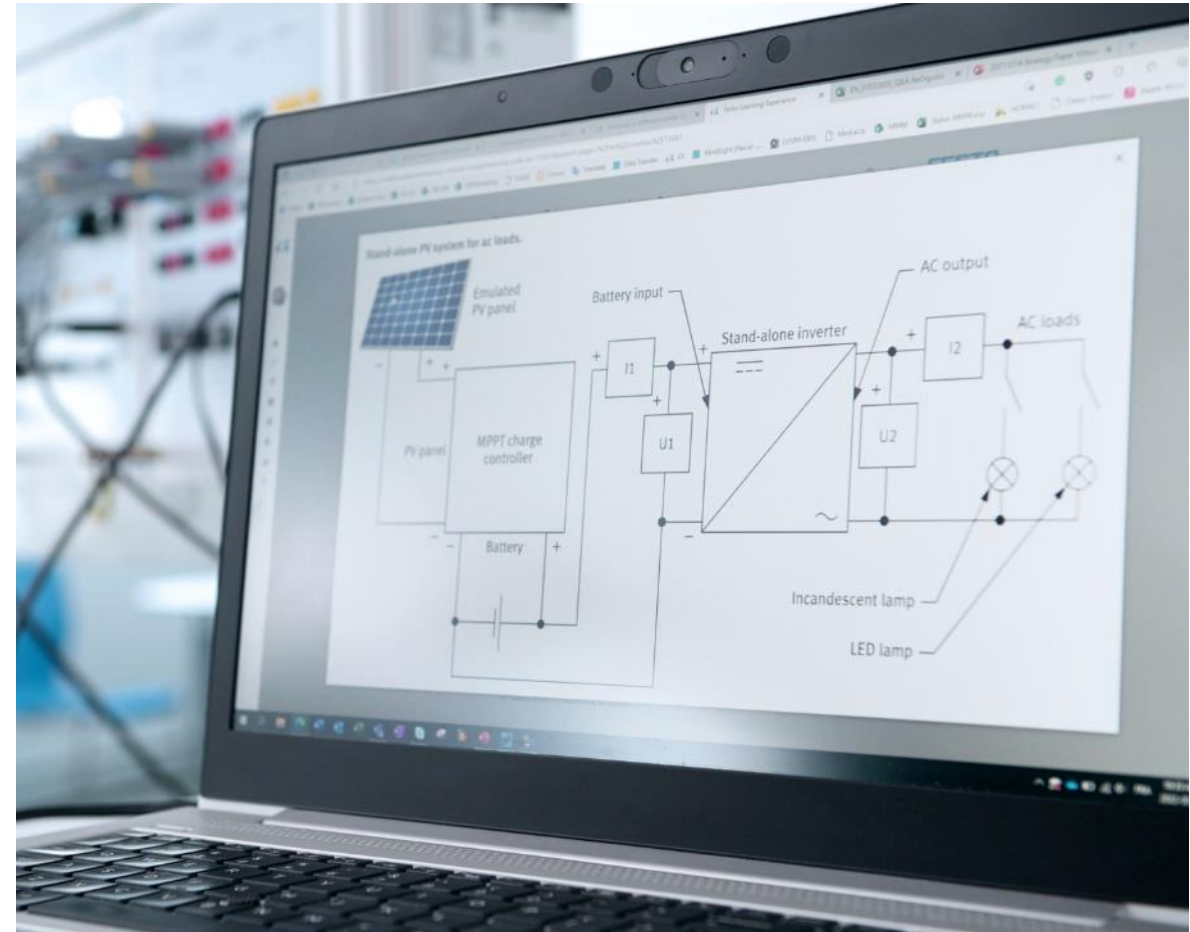


The new energy landscape is decentralized, decarbonized, digitalized.

To harness their full potential, renewables must be seamlessly integrated into the electrical grid and energy storage options must be efficient.

Success largely depends on the readiness and capabilities of qualified workers.

Renewable energy **heavily involves electrical engineering** – a key field of expertise at Festo Didactic.



WorldSkills: An investment in a more sustainable future

Festo acknowledges the importance of renewable energy. This is why we were a lead equipment sponsor for the very first edition of the “Renewable energy” (skill 62) competition in 2022.



Prepare workers to harness renewable, clean energy sources.

We can help you build skills in **key skills areas**, especially for:

- Electricians (industrial, residential)
- Renewable energy/environmental technicians/engineers
- Electrical and power technicians/engineers
- Process automation technicians/engineers
- And more



01

Essential prerequisites for technical careers in renewable energy production

02

Installation, operation, and maintenance of renewable energy systems

03

Comprehensive training in electric power technology

04

Training in process automation to support renewable energy deployment.

Chart customized learning paths.

Our digital learning portal, Festo LX, is the backbone for skills development.


A comprehensive collection of varied learning content enables learners to study precisely what they need, at their own pace, creating a stimulating learning experience adapted to the latest educational trends.

Browse the collection on lx.festo.com

Create your account




A sample of relevant courses




Going Green ⋮
eLab course by Festo Didactic

👤+ Show More




Introduction to Alternative Energy ⋮
eLab course by Festo Didactic

👤+ [Show More](#)




Renewable Energies ⋮
eLearning course by Festo Didactic

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Photovoltaic Systems ⋮
eLab course by Festo Didactic

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Wind Power Systems ⋮
eLab course by Festo Didactic

👤+ [Show More](#)




Introduction to Wind Power ⋮
eLab course by Festo Didactic

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Solar Power ⋮
eLab course by Festo Didactic

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Hydropower Electricity Generation ⋮
eLab course by Festo Didactic

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Nacelle – Operation and Maintenance ⋮
eLab course by Festo Didactic

👤+ Show More




Automatic Power Factor Correction Systems ⋮
eLab course by Festo Didactic

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Doubly-Fed Induction Generators ⋮
eLab course by Festo Didactic

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Temperature Process and Heat Exchanger ⋮
eLab course by Festo Didactic

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Introduction to Solar Thermal Energy ⋮
eLab course by Festo Didactic

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Solar Thermal Energy Systems ⋮
eLab course by Festo Didactic

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Home Energy Production ⋮
eLab course by Festo Didactic

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Hydrogen Fuel Cell ⋮
eLab course by Festo Didactic

👤+ Show More



Lead-Acid Batteries ⋮
eLab course by Festo Didactic

👤+ [Show More](#)



Ni-MH Batteries ⋮
eLab course by Festo Didactic

👤+ [Show More](#)

01

Convey essential prerequisites for technical careers.

Safety

Power supply systems and protective measures



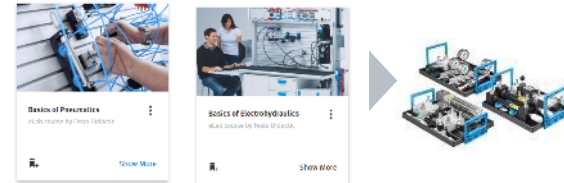
Industrial wiring

Enclosures and conduits, electrical panel, schematics, ...

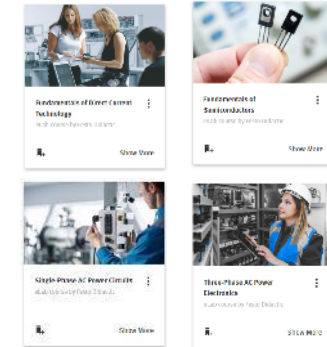


Fluid power

A large range of training packages covers from basic to advanced topics in hydraulics and pneumatics



Electricity basics



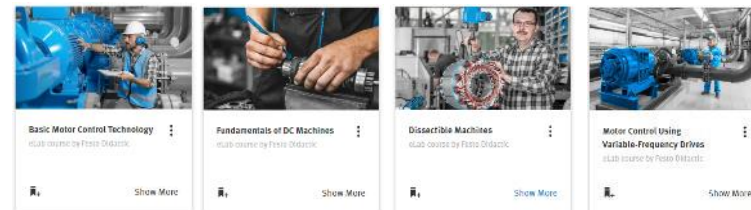
AC/DC (TP 8012 or EMS*, suitcase*), Electricity fundamentals (TP 1011)

PLC



Programming and troubleshooting with the EduTrainer PLCs or the Advanced PLC training*...

Motors and drives



Basic motor control (TP 1221), servo brake and drive system (TP 1410), variable-frequency drives*, dissectible machines*...

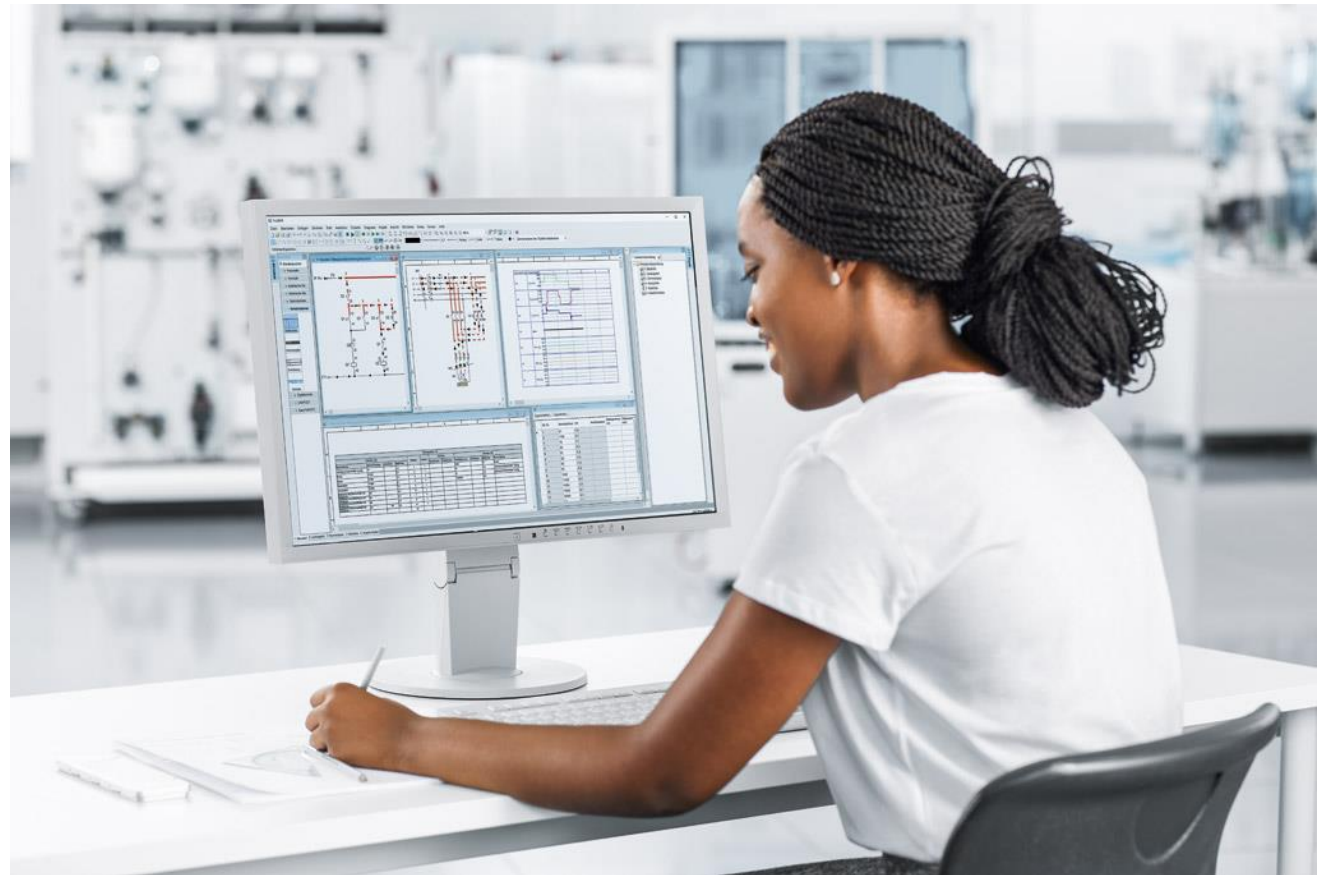
01

Convey essential prerequisites for technical careers.

Design. Simulate. Learn. For more than 20 years, FluidSIM has been the world's leading circuit diagram design and **simulation program** for pneumatics, hydraulics and **electrical engineering**.

Version 6 now sets a new standard of individuality and convenience for teachers and students.

Designing circuits, bringing them to life through simulation and learning for life in the process.



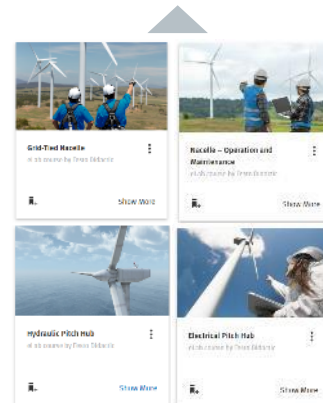
Installation, operation, and maintenance of renewable energy systems



Wind turbines

Practical training for wind turbine technicians: wind energy technology, logic of operation, electrical and mechanical safety, and electric power and electronics, & mechanics and hydraulics.

To the [wind power virtual demo room](#)



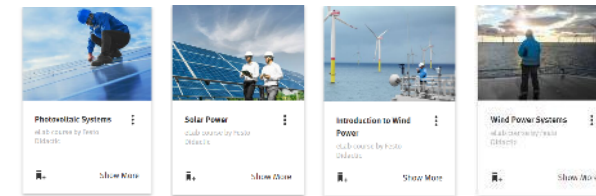
Solar thermal

A solar hot-water heating system that teaches the basic principles of thermal energy.



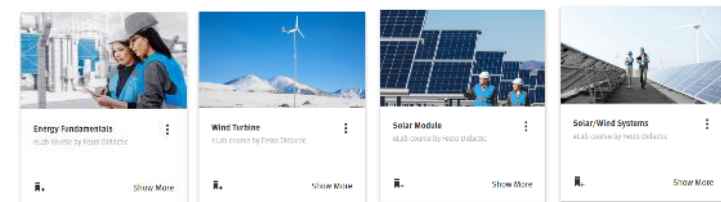
Solar and wind power (TP 8012)

Understand small-scale renewable energy production systems and their components.



Solar/wind energy*

The fundamentals, installation, operation, and servicing of solar & wind energy systems.



Geothermal system*

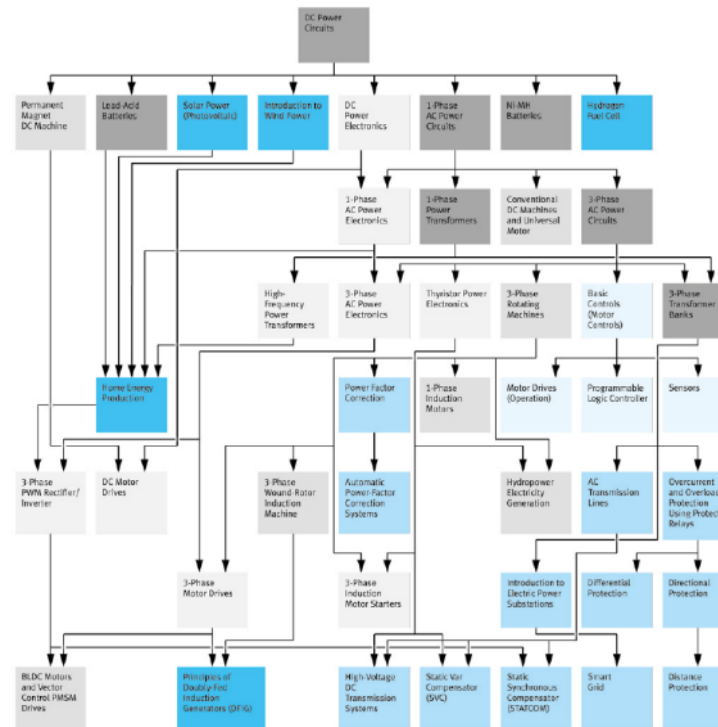
Develop skills for the installation, operation, and troubleshooting of residential geothermal heat pumps.



Comprehensive training in electric power technology

The EMS: A unique training program based on a benchmark platform

- Extensive training program covering the basics of electric power, renewable energy, power electronics, smart grid, rotating machines, and industrial controls
- Practical experimentation on electric power systems created using modules
- Pre-set, but customizable packages
- Digitalized hardware for data acquisition and control
- Courses on Festo LX



Comprehensive training in electric power technology

Training packages TP 8012

A collection of unique courses in electrical engineering focused on practical experimentation on electric power systems replicated using modular training packages.

- Pre-set, but customizable packages
- Digitalized hardware for data acquisition and control
- Solar panel and wind turbine emulator
- Courses on Festo LX

Topics covered: AC/DC power circuits and transformers, solar and wind power, power electronics (upcoming), and more to come.



Process automation training to support renewable energy deployment.



Why?

Process automation improves efficiency, quality and safety. It plays a great role in achieving sustainability.

- **Renewable energy production** (e.g. green hydrogen)
- Battery manufacturing
- Water management
- Energy efficiency
- Sustainable manufacturing



Process automation training to support renewable energy deployment.

PA fundamentals

MPS PA Compact workstation

Closed-loop control, level, flow, pressure, and temperature



MPS PA Stations/System

Filtration, mixing, reactor, and bottling processes



Instrumentation & process control*

Pressure, flow, level, temperature, heat exchanger, process dynamics, proportional & PID & cascade control...



Industrial PA

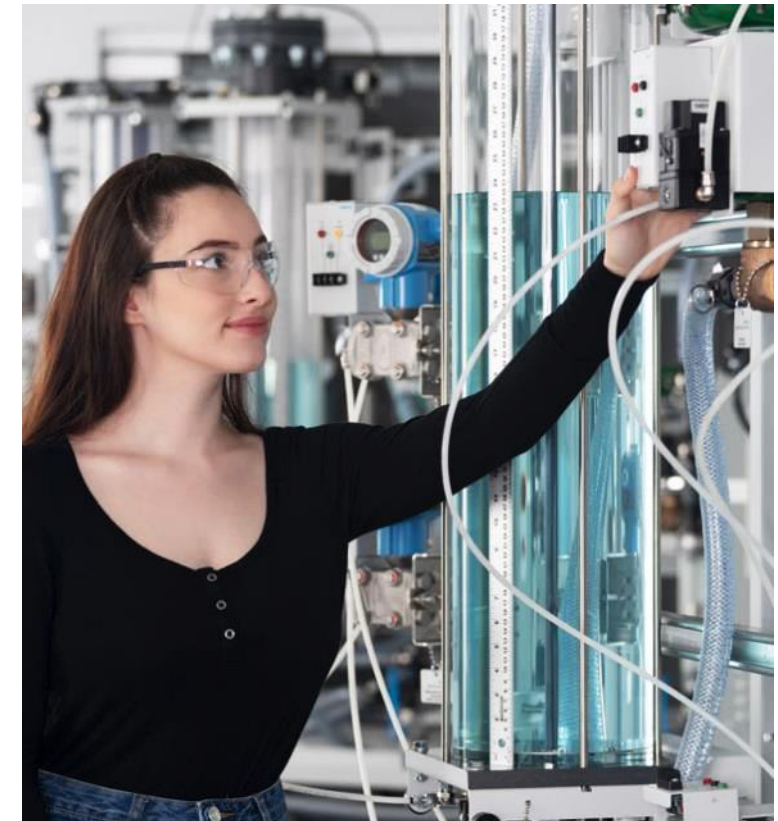
Process learning systems*

Industrial control systems for pressure, flow, level, temperature, pH, conductivity, air pressure/flow processes, fast heat exchanger, control strategies...



PlantPax DCS demonstrator*

Distributed control systems, Industrial instrumentation, control strategies...



Workforce development: Specialized training for current workers

Leverage our expertise in a wide range of topics, like:

pneumatics | hydraulics | electricity & electronics | PLC |
maintenance and troubleshooting on fluid power
systems | industrial problem-solving in maintenance |
energy efficiency | instrumentation and control | electric
motors | ...

Contact your Festo local company to learn about the
training offering in your country.



Start planning your path.

Discuss your training requirements regarding green skills development.

Contact us: didactic@festo.com

The blue path to green skills

Your way to sustainability training

