Designing the Digitalization!
VISIT ETS
Solutions – „Made in Germany“

The new headquarters of ETS DIDACTIC
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Made in Germany
The digital learning factory 4.0, the connectedFACTORY CPS-i40®, has been developed for education and qualification in the field of automated and digital production.

The qualification of young talents and the advanced training of experienced personnel for tomorrow’s job market demands are on focus.
Configurable learning situations

Stand-alone or system operations

Augmented Reality with tec2SKILL®

Driverless transport system
ETS QBOT360®
intelligent networking is a main point in the CPS-i40® learning factory. The vertical integration, i.e. the extension of the shop floor with the management level using the MES - Manufacturing Execution System - up to the ERP - Enterprise Resource Planning System, forms the seamless information exchange structure throughout the entire supply chain of a modern production system.

SAP4SCHOOL CPS-i40®
connectedFACTORY & Digital Factory

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The learning factory CPS-i40® is the basis of a flexible production process here. The integrated business software, made by the market leader SAP is used as a linking element. Due to SAP ERP and SAP ME, the entire flow of goods and information at the machine and system levels can be tracked.
The increasing digitalization of networked production plants is becoming more and more important for the educational sector as well.

The so named „Digital TWIN“, as the digital twin of the individual CPS-i40® stations of the connectedFACTORY made by ETS DIDACTIC is called, allows virtual commissioning before bringing the real system into operation.

First virtual, then real – this results will be the safe of time & money in the industrial sector. Prior to the transfer into the real process, modifications to the system are simulated, programmed and then tested for safe function in the virtual environment.
The Manufacturing Execution System (MES) represents the joining of the planning level and the production level.

Always on focus – the MES provides transparency throughout the entire production process. Manufacturing sequences can be easily coordinated with each other so that the highest possible productivity can be realized. From „Big Data“ to „Smart Data“, the MES software supports the permanent optimization process. Therefore the trainee can become familiar with the handling, the evaluation possibilities and the adaptation or coordination of process and software, competences essential for the future working environment 4.0.

As a matter of course, our CPS-i40® system is accompanied by comprehensive courseware to facilitate the learning process for the instructors as well as the trainees.
Due to the increasing digitalization of industrial installations, the data security risk increases automatically. It is vital to operate protection networks safely and to protect them against external influences.

The training system made by ETS aims at developing action competences and training the ability to recognize dangers and take precautions for preventing them. Practical exercises are paramount for developing competences.
Network Security as a Key Element of the Industrial Security Concept
INDUSTRIAL ROBOT
Virtual Reality

SAFETY CUBE®
6-axes Industrial Robot

- Object detection
- Profinet - Interface
- Practical learning situations for knowledge transfer
- VR integration
- Discover the virtual world
COLLABORATIVE ROBOT
Robot Simulation | Humanoid Robot

- Collaboration of people & machine
- Programming by guiding
- Programming with tablet and PC
Whether with tablet or Smart Glasses - due to the augmented reality application, references are created from the fundamentals of sensorics to the practical applications in the connectedFACTORY - from theory to practice.

Based on Augmented Reality (AR), the APP tec2SKILL® enables the trainee to acquire useful information. The operating principles of real industrial applications, data sheets and commissioning instructions top off the learning situation in the application.
Parameterize, configure and control the connected sensors by using smart devices.

Simultaneously, you will be given the product data of the sensors and further information that is useful for maintenance and service.
FROM THE SENSOR INTO THE CLOUD

- From Operating Technologie (OT) to Information Technologie (IT)
- Commissioning of a PROFINET system with integrated TIA-Portal
- Commissioning of IoT and integrating IoT in the process
- Familiarizing with the Node-RED-Editor
- Fundamental experiments with the Node-RED
- Sending control values to an MQTT broker
- Displaying machine data on a mobile phone
PNEUMATICS / ELECTROPNEUMATICS

with the Digital Learning Assistant tec2SKILL®

- Application-oriented circuit configuration
- Interactive preparation of learning modules for pneumatic and electropneumatic applications

The digital learning assistant for Pneumatics/ Electropneumatics
The Learning Assistant tec2SKILL® Mechanical is a digital assistant providing didactic support in gear technology for the tablet - and this is NEW - for “Smart Glasses”.

Available for all gear types

Helical gear 1-stage
Helical gear 2/3-stage
Planetary gear
Worm gear
Bevel gear
- Mounting types of roller bearings
- Assembly and disassembly of various roller bearings
- Learning situations on bearing technology completed by didactic documents

Available roller bearing systems

- Hamme assembly - inner ring
- Hammer assembly - outer ring
- Pressure assembly
- Tapered tight fit - mechanical
- Tapered tight fit - hydraulic
- Therm. Assembl. Ball Bearing on Shaft
The basics of this comprehensive field can be taught fast and clearly due to the compact and mobile learning system with varied training situations and experiments to each topic.

The safe design, the universal power supply for flexible use and the perfectly harmonized comprehensive courseware comprising manuals, overlay masks and training software supports the trainer and instructor with planning and implementation phases of their subject-oriented lessons.
The MC Training System impresses with its universal „Embedded System“ concept with practice-oriented applications and forward-looking design.

Also available for electricians for information technology systems

NEW
The new Manual „ATmega328P Part 2“ is available!
POWER ENGINEERING / ELECTRONICS
Energy Efficiency is on the Focus

CONTROL TECHNOLOGY
Fundamentals of Control and Automated Control Technology

- Compact and clear
- Consolidated fundamental knowledge transfer
- Practice-oriented learning situations
- Didactic reduction to the point

- Various motors

- Integrated measuring technology
Intelligent building technology or „Smart Building Technologies“, i.e. the automation and amenities in the daily home, office and work flow are currently a focus of building automation.

The convergence of different trades and their communication with each other make our lives more convenient and comfortable.
Due to this technical progress, the required knowledge and skills are changing rapidly in the professional training for electrician for energy and building technologies and building / infrastructure systems.

The modern and modular SmartHome ETS training systems support you in the fields of KNX, VOIP, lighting and hazard detection systems.
PROTECTIVE MEASURES
Becoming familiar with Safety Functions

- Practice-oriented learning concept for protective equipment measurements in accordance with VDE0100 bis zu VDE0701-0702
- Learning situations for all protective measures
ROOM CONCEPT
Customized Laboratory Tables

- Individually configurable power supply
- Ergonomic workplace design
- Individual storage concept