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Lifelong learning with the Curriculum 4.0

Festo Didactic develops learning paths for a digitalized future

If you want to be fit for Industry 4.0, you need a qualification plan. The newly developed Festo Didactic Curriculum 4.0 combines a wide variety of learning paths aimed at specific job roles in an industrial context, such as mechatronics engineers. With the Curriculum 4.0 trainees and professionals can keep up with the rapid developments in Industry 4.0 and help shape these exciting times - throughout life.

Self-learning systems, artificial intelligence, Big Data, Cyber Security or Predictive Maintenance - a few years ago the contents of these terms were only familiar to insiders. Now, in the age of digitalization, many professionals in industrial environments encounter them daily. Every day brings with it an increase in knowledge. Trainees and apprentices, but also people who have been working for some time, need to acquire this knowledge to keep up with the times. For this reason, Festo Didactic has developed the Curriculum 4.0 together with pedagogical and research experts as well as technical education practitioners. The modular learning paths for digital topics consist of small learning units offered in new digital formats and tailored to concrete Industry 4.0 occupational profiles in the context of Industry 4.0.

Focus on learning experiences

Digitalization not only shapes learning content, but also learning processes. The development of individual learning paths that are precisely tailored to the needs of the learner. Gamification, i.e. playful learning, allows for fun learning experiences. Virtual reality and augmented reality reinforce these impressions for the learners. Digitalization increases flexibility: online learning also means consuming learning content on the go or at home. A perfect match: the new learning portal LX from Festo Didactic, which combines small digital learning units in a single central online portal.

Lifelong learning

Often official curricula of educational institutions lag behind the development of Industry 4.0 topics. Until learning needs are identified, integrated into curricula and implemented, new technologies are already on the doorstep. This makes it difficult for the learners to acquire the requested agility. The solution? Developing skills such as the 4C's skills so that employees can find their way in dynamic situations. "This is a burning issue! Lifelong learning has been talked about for a long time, but now the time has come to put it into practice," explains Dr. Hans-Jörg Stotz, member of the Management Board of Festo Didactic.

The 4C's of agile working methods

Agile working methods are becoming increasingly important. They are based on "soft" methodological and social skills. These include the 4c's: ability to cooperate, communication skills, creativity and critical thinking. A pillar of the Festo Didactic Curriculum 4.0 includes the development of these competencies. Learners deal with realistic problems based on operational scenarios and thus improve their creativity. Teamwork fosters the necessary communication and cooperation skills. In doing so, learners work from

different perspectives on different approaches to problem-solving and thereby, develop their critical thinking.

The highlight of the Curriculum 4.0: Festo Didactic continuously adapts the learning content to the current and relevant topics of Industry 4.0 as well as to the job descriptions and competencies required by professions such as mechatronics engineers. The landscape with the Industry 4.0 topics consists of five pillars - from basics to expert knowledge. The personalized Curriculum 4.0 is derived from the topic landscape. Depending on the occupational profile, such as mechatronics technician, IT specialist or industrial mechanic, learning paths are created and precisely tailored to each occupation.

The paramount importance of physical learning systems

Hands-on training remains highly relevant for training future workers. Paired with physical learning systems such as the Cyber-Physical Factory or the Modular Production System (MPS) from Festo Didactic, learners benefit from optimal conditions for internalizing learning material. Simulation tools and VR applications from Festo Didactic enable risk-free, experimental learning. This reduces the risk of accidents and efficiency losses. Basic topics of technical training and the fundamentals of Industry 4.0 can be practiced optimally on MPS systems or the CP Lab system. The CP Factory is then used to go deeper into specific topics and provide further training and research opportunities. "This enables companies and training centers to use state-of-the-art technology with industrial components for action-oriented learning," explains Dr. Sandra Funk, expert for Factory Automation and Fluid Power at Festo Didactic.

Press Images



The Learning Content Landscape

Learning paths aimed at specific job roles in an industrial context.