Marked: Necessary competences for teaching the students module "Smart Light Control"

Additional competences for further development of the module

Competences Matrix Teachers Vet 4.0				
	Digital competencies			
Competence development fields	**1. Professional competences 4.0**	**2. Media competences**	**3. Application know-how**	**4. Basic ICT know-how and skills**
A. To develop and implement annual teaching plan and to manage documents	1.1. To identify technological and organizational changes in the mechatronics and electronics in the systemic way for the training course and to prepare them didactically. 1.2. To evaluate the possibilities and risks of the digitalized work and business processes. 1.3. To restructure networked process chains in learning 1.4. To train by applying content of embedded systems, including their operating systems. 1.5. To provide know-how on handling interactions with sensors, reading information and collecting of data. 1.6. To train on handling the processes of robotics (robot and "cobot"), including know-how to program and control production robots in the different technological processes. 1.7. To provide know how on the installation and exploitation of the Internet of Things and CPS.	2.1 To identify and assess digital key competences applied in the ICT media. 2.2 To identify the media competences applied in the work, business and social contexts. 2.3 To design and plan the installation of the media technologies in the school. 2.4 To organize cooperation of learners in the digital learning environment. 2.5 To organize knowledge management.	3.1. To install learning management systems. 3.2. To install specialized social media 3.3. To install professional software for learning 3.4. To select and install the didactic instruments for cooperative learning 3.5. To document the digital teaching plans for common (cooperative) usage. 3.6. To handle software for management.	4.1 To install professionnally Office software appliances. 4.2 To configure and set-up learning management systems. 4.3 To provide digital applications in the local area network
B. To plan and design learning processes	1.1. To design the concept of digital process chain (4.0) in the teaching and learning process. 1.2. To select digitalized learning and teaching scenarios that facilitate problem oriented and self-organized learning. 1.3. To plan and execute interactive, virtual and individual learning phases. 1.4. To organize the interdisciplinary cooperation in the learning process.	2.1. To select, install and evaluate the digital teaching and learning scenarios. 2.2. To check the used media for accessibility/openness, problem solving and requirement level. 2.3. To check on how the media facilitate development of decision making skills, abilities to cooperate and creativity.	3.1 To install the elements of digital learning scenarios and formats (Blended und Online-Learning)	4.1. To integrate audio and video data 4.2. To prepare video-tutorials 4.3. To prepare Digitalized Content 4.4. To integrate the data from external and internal sources in the teaching. 4.5. To consider copyright protection issues.
C. To communicate, cooperate	1.1. To select interactive media for learning and training. 1.2. To present the information and data for learners by using interactive media. 1.3. To ensure the safety of personal and corporate data used in the training and work processes.	2.1. To execute timely and operative communication with the internal (school) and external addressees regardless their location and time.	3.1. To apply the digital communication instruments for the regular and remote teaching. 3.2. To use electronic teaching diaries.	4.1. To evaluate the data of learning, teaching and work processes. 4.2. To handle inquiries and feedback from the digitalized instruments.
D. To analyze and evaluate learning process, achievements and success of learners	1.1. To check media usage for occupational and learning relevance. 1.2. To design reflection processes. 1.3 To evaluate content, human and technical resources for media use.	2.1. To identify informally and non-formally acquired digital skills. 2.2. To analyze students' media literacy development. 2.3. To analyze and classify media technology in the course of education.	3.1. To plan and evaluate the formats of individual and team activities. 3.2. To select and install the online tools for diagnostics and assessment of performance at learning and work.	4.1. To collect, aggregate, analyze and evaluate data from learning processes (Learning Analytics) 4.2. To adjust the performance rating tools. 4.3. To apply privacy and data security requirements