BEM Микрокреденцијал

		Programming of industrial robots
BEM Content (for all partners)	**Micro-Credential Title**	**Programming of industrial robots**
	Purpose of the Micro-Credential	The purpose of the microcredential program is training for determining initial commands and parameters in the robot programming process, for simple corrections of the program according to the order, as well as for manual programming of the robot. It also adjusts the parameters of the simulation of the robot's operation using a computer.
	Target Groups (Who it is intended for)	Employees in production companies, unemployed, people who want to retrain and adults.
	Sector	Industry, construction, manufacturing
	Areas of Application/Work Environment	Manufacturing industry, Automotive sector, Construction industry, Pharmaceutical industry, Health industry, Logistics and storage industry, Food and drink industry
	Typical Jobs/Tasks	Creating simple programs, teaching the industrial robot positions, testing the program and correcting errors, loading the program into the robot controller, preventive maintenance

		Knowledge:	Skills	Key competence
	Learning Outcomes (Professional and Key Competencies)	• Explain the concept, purpose, mode of operation of robots, species and their characteristics; • Describes the coordinates of the system and the kinematics of the robot • explain the mechanical, drive, measurement, sensor and control subsystem of the robot; • list and explain programming commands • explain the application of robots in servicing, assembly, welding, machining and internal transport; • explain robot-computer communication;	• prepares the robot for work and handles the robot; • controls the robot using the teach box; • defines initial commands and robot programming parameters and performs simple program corrections according to the designer's instructions; • manually programs the work of the robot for simple robotic technological tasks with correction of the parameters of the executable program; • adjusts the parameters of the simulation of the robot's work using a computer; • connects the robot with the industrial environment; • efficiently applies information technologies for data collection in the implementation of tasks;	• Programming simpler tasks of the robot and correction of the program by order; • Integration of robots into a flexible technological line; • Monitoring and monitoring the operation of industrial robots, identifying, determining and eliminating problems; • Taking measures for safety and health at work, environmental protection and fire protection in the field of industrial robotics;
	Validation	Criteria • Reliability (compliance of the assessment with established, public, and precise evaluation criteria)		Procedures

		- Validity (the assessment reflects learning outcomes - achievement of outcomes, student engagement, and progress) - Variety in assessment methods (selection and application of different methods and techniques to ensure validity, reliability, and objectivity of assessments) - Non-discriminatory evaluation, ensuring no bias or exclusion on any grounds.	- Forming an examination commission - Establishing a list of exam tasks - Drawing work tasks - Verifying competence through task completion - Recording exam results - Issuing certificates
	Recognized/Accepted by	Company name: *Johnson Electric d.o.o. Nis, Serbia* *ДМВ Контролни системи, Ниш, Србија*	
	Organizers of training and training/ Provider(s)	Vocational schools Publicly recognized organizations for education activities (JPOA)	
Additional Information (if applicable	Entry level / prerequisites	Level 3 or Level 4 NOKS (National Qualifications Framework) achieved through the completion of three- or four-year vocational education programs in the fields of mechanical engineering and metalworking or electrical engineering.	
	Possible duration (recommendation)		
		125 hours	
Specific content (national) (if needed)	Position in the chain of educational programmes	Non-Formal Education	
	Reference to NQF	Level 4 NOKS; Level 4 EQF (European Qualifications Framework)	
	Credits	5	