

# BEM Micro-Credential



BEM Content (for all partners)	Micro-Credential Title	Maintenance of Pneumatic Systems		
	Purpose of the Micro-Credential	<p>The purpose of the microcredential program is to equip participants with the skills necessary to independently operate and maintain pneumatic and electro-pneumatic systems, assemble system components, and diagnose system failures.</p> <p>The purpose of the programme is also to provide the labour market with skilled employees and young people with sustainable qualifications for work in the areas of maintenance of pneumatic and electro-pneumatic systems, need for professional training, career development and promotion of employability.</p>		
	Target Groups (Who it is intended for)	Employees in manufacturing companies, unemployed individuals, people seeking retraining, and adults.		
	Sector	Pneumatics and electropneumatics are used in the production sector of the economy, both in light industry (food, wood, textile, tobacco, leather and footwear industry, rubber industry) and in heavy industry (mining, energy, metallurgy, electrical industry, mechanical industry).		
	Areas of Application/Work Environment	Pneumatics and electropneumatics are present in all technical branches within production lines, ranging from the automotive industry, machine tools, robots, toys, and medical instruments to household products.		
	Typical Jobs/Tasks	<p>Installation of components of pneumatic and electropneumatic devices and systems</p> <p>Diagnosing failures in pneumatic and electropneumatic devices and systems</p> <p>Testing the performance of individual components of pneumatic and electro-pneumatic systems</p> <p>Repairing failures in pneumatic and electropneumatic devices and systems</p> <p>Maintaining pneumatic and electropneumatic equipment</p> <p>Performing administrative tasks</p>		
	Learning Outcomes (Professional and Key Competencies)	<b>Knowledge</b> <ul style="list-style-type: none"> <li>• Explain the operating principles of pneumatic and electropneumatic systems</li> <li>• It distinguishes the elements of pneumatic and electro-pneumatic systems</li> <li>• Distinguish the elements of functional control schemes for electropneumatic systems</li> <li>• Explain the graphical interface of software for simulating system operations</li> <li>• Explain the procedures for measuring mechanical and electrical magnitude</li> <li>• Differentiates types of characteristic failures in pneumatic and electropneumatic systems</li> </ul>	<b>Skills</b> <ul style="list-style-type: none"> <li>• Create a functional management scheme;</li> <li>• Use manufacturers' catalogs for pneumatic and electropneumatic equipment</li> <li>• Create a specification of required materials</li> <li>• Use simulation software for pneumatic and electropneumatic systems</li> <li>• Assemble pneumatic and electropneumatic systems</li> <li>• Connect system elements according to the control scheme</li> <li>• Adjust system parameters</li> <li>• Conduct final tests and ensure the system completes one work cycle</li> </ul>	<b>Key competencies</b> <ul style="list-style-type: none"> <li>• Assembling components of pneumatic and electropneumatic devices and systems</li> <li>• Diagnosing device and system failures</li> <li>• Repairing failures in pneumatic and electro-pneumatic devices and systems</li> <li>• Maintaining pneumatic and electro-pneumatic equipment</li> <li>• Performing administrative tasks</li> </ul>

		<ul style="list-style-type: none"> <li>Describe the types of technical documentation and record keeping</li> <li>Describe environmental protection procedures in the production process</li> </ul>	<ul style="list-style-type: none"> <li>Corrects the operation of the system as necessary;</li> </ul>	
	Validation	<b>Criteria and Procedures</b> <ul style="list-style-type: none"> <li>Reliability (compliance of the assessment with established, public, and precise evaluation criteria)</li> <li>Validity (the assessment reflects learning outcomes - achievement of outcomes, student engagement, and progress)</li> <li>Variety in assessment methods (selection and application of different methods and techniques to ensure validity, reliability, and objectivity of assessments)</li> <li>Non-discriminatory evaluation, ensuring no bias or exclusion on any grounds.</li> </ul>	<b>Procedures</b> <ul style="list-style-type: none"> <li>Forming an examination commission</li> <li>Establishing a list of exam tasks</li> <li>Drawing work tasks</li> <li>Verifying competence through task completion</li> <li>Recording exam results</li> <li>Issuing certificates</li> </ul>	
	Recognized/Accepted by	<b>Company Name:</b> Johnson Electric d.o.o., Niš, Serbia		
	Organizers of training and training/ Provider(s)	Vocational schools Publicly recognized organizations for education activities (JPOA)		
<b>Additional Information (if applicable)</b>	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)			
<b>Specific content (national) (if needed)</b>	Position in the chain of educational programmes	Non-Formal Education		
	Reference to NQF	Level 4 NOKS; Level 4 EQF (European Qualifications Framework)		
	Credits	5		