BEM Micro-credential

BEM content (for all partners)	Title/name of the credential	*Waste Management Operator*
	Function of the micro-credentials / purpose	*The micro-credential is designed for the needs of establishing an integrated system for packaging waste management (plastic, paper/cardboard, glass, metal, wood and composite materials) and waste electrical and electronic equipment (with all components, subassemblies, parts and materials) to the appropriate operating unit.*
	Possible target groups	*Institutions that treat all types of waste, production companies. In accordance with the Law on Waste Management, legal and natural persons who, in the course of their activities, generate more than 200 kilograms of hazardous waste and/or more than 150 tons of non-hazardous waste in the course of a calendar year are obliged to appoint at least one professionally qualified person - manager for waste.*
	Branch/sector of application	*Chemistry and Technology*
	Fields of application / work environment	*Cooperate with households, public institutions of local and central government, as well as industrial facilities, service and commercial sectors and relevant agencies.*
	Typical work/professional tasks	*Waste Management Operator performs the following tasks:* *Identifies, systematizes and codes waste* *• Performs appropriate treatment of waste depending on the type of waste.* *• Processes the waste using an appropriate operation depending on the properties of the waste* *• Controls the process of creating waste in technological processes* *• Selects non-hazardous, inert and hazardous waste* *• Collects, transports, stores, processes, disposes and labels all types of non-hazardous, inert and hazardous waste* *• Identifies special types of hazardous waste*

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	Learning outcomes[1] (personal and job related)	Knowledge	Skills	Key competences
		The participant should be able to: - carries out the systematization and coding of waste according to the List of types of waste - determines the characteristics of the waste - chooses an appropriate waste processing operation depending on the waste properties, performs appropriate waste storage depending on the characteristics - applies procedures of collection, transportation, processing, removal and/or notification of waste depending on the properties of the waste - applies appropriate ways and operations of removing the different types of dangerous and non -dangerous - identifies hazardous waste and handles it in an appropriate manner - knows the rules for dealing with hazardous waste - performs appropriate recording and classification of hazardous waste - applies appropriate methods of packaging, labeling and transporting hazardous waste - uses an appropriate way of dealing with special types of hazardous waste - handles waste oils appropriately		**Native language communication**: able to share and yes interprets thoughts, feelings, facts and attitudes, verbally and written form, and to realize linguistic interaction with colleagues, superiors and clients in different social and cultural contexts. She/He is able to formulate and express his own oral and written arguments in a manner appropriate to the context. **Communication in foreign languages:** is able to understand and express the simple way feelings, facts and attitudes orally and in writing. **Mathematical Competences and Core Competencies in Science and Technology:** Apply Numerical Thinking and knowledge in explaining the nature of solving a series of tasks during daily operation and use of equipment and administration.

[1] The rule when writing learning outcomes is that they should relate to the three domains of learning (cognitive, affective, and psychomotor). Accordingly, the statement defining the learning outcome should refer to the acquisition of knowledge and skills through which competencies are acquired.

		- treats appropriately and disposes of special types of hazardous waste (polychlorinated biphenyls (PCB) – synthetic chemicals, waste oils, medical waste and titanium dioxide) - carries out appropriate collection, transportation, storage of special types of hazardous waste - handles waste batteries, accumulators, electronic and electrical equipment accordingly - handle asbestos waste, asbestos products and tires appropriately - identifies restrictions and bans on the use of the content of certain hazardous substances in electrical and electronic equipment	Uses and works with simple mathematical operations and calculations. **Digital Competencies**: Uses basic IT technology in order to provide the best possible protection. It uses digital information and uses it in a systematic way. **Learn how to learn:** he is able to access, acquire, process and adopt new knowledge and skills for the purposes of personal progress, as well as to them applies the same to advance the technique and technology of execution of the work of. Persistent in autonomous learning, but also in learning during the work with the collaborators in the area. Pursue innovation in order to made progress in establishing the integrated system for waste management teaches how to reconcile social, economic and environmental aspects. The studies business practices and how they affect the development of work processes etc. **Social/societal and civic competences**: in everyday environment, is capable of

			manifesting personal, interpersonal and intercultural competencies for constructive communication with people from different profiles, shows tolerance, expresses and understands different points of view and creates trust. • **Sense of initiative**: shows initiative to realization of the important ideas and their implementation in actions, with a goal to improve practices. To be able to recognize opportunities and the challenges of improvement in different situations. It contributes towards the development of a culture that supports and values them initiatives, recognizes the different skills of everyone within of the activity. **Cultural awareness and expression**: recognizes and appreciates it the creative expression of ideas, experiences and emotions and the members in the team appropriately links them to self-improvement. It brings them closer own creative and expressive attitudes with the

			thoughts of other team members, their families and other colleagues, and expresses in an appropriate way that will improve theirs well-being.
	Validation	criteria	procedures
		The participant should be able to: *- identifies sources of waste generation* *- identifies waste by type* *- knows the characteristics of each type of waste* *- carries out systematization and coding of waste according to the List of types of waste from the Ministry of Environment* *- determines the characteristics of the waste* *- knows the impact of waste on the environment* *- applies principles of waste management* *- performs an appropriate approach to waste management depending on the conditions and type of waste* *- explains the hierarchy of waste reduction* *- describes the prevention and reuse features* *- reads environmental labels* *- identifies the conditions under which waste is processed* *- chooses an appropriate waste processing operation depending on the properties of the waste* *- recognizes the technological procedures for the processing of secondary raw materials* *- controls the process of waste generation in technological processes* *- distinguishes non-hazardous, inert and hazardous waste* *- applies the rules for dealing with non-hazardous and inert waste* *- applies rules for dealing with industrial non-hazardous waste*	

		- carries out appropriate treatment of household waste, public areas, industrial, medical and agricultural waste - carries out appropriate storage of waste depending on the characteristics *- applies procedures of collection, transportation, processing, removal and/or notification of waste depending on the properties of the waste* *- applies appropriate ways and operations of removing the different types of dangerous and non-dangerous* *- identifies hazardous waste and handles it in an appropriate manner* *- knows the rules for dealing with hazardous waste* *- performs appropriate recording and classification of hazardous waste* *- understands the purpose of examining the characteristics of hazardous waste* *- applies appropriate methods of packaging, labeling and transporting hazardous waste* *- uses an appropriate way of dealing with special types of hazardous waste* *- handles waste oils appropriately* *- treats appropriately and disposes of special types of hazardous waste (polychlorinated biphenyls (PCB)* *– synthetic chemicals, waste oils, medical waste and titanium dioxide)* *- carries out appropriate collection, transportation, storage* *- the special types of hazardous waste* *- handles waste batteries, accumulators, electronic and electrical equipment accordingly* *- handle asbestos waste, asbestos products and tires appropriately* *- identifies restrictions and bans on the use of the content of certain hazardous substances in electrical and electronic equipment* • *- knows the decomposition time of solid waste materials and understands the role of treatment*
	Recognised/accepted (documented by MoU)	Name of companies *ASD Metal Group DOO Import-Export Shuto Orizari Skopje, Company for production, trade and services PLASTIC RECYCLING import-export and others, Pacomak*
	Provider(s)	*Companies.* *Secondary schools for VET (conditionaly)*

Additional information (if needed)	Entry level / prerequisites	*Persons with completed secondary education for occupation, professional technical and/or high school education.*
	Possible duration (recommendation)	*The micro-credential is obtained after 90 hours of active learning*
Specific content (national) (if needed)	Position in the chain of educational programmes	*In the existing educational programs it is not present. Some of the learning outcomes appear in some of the qualifications*
	Reference to NQF	*The term is not defined in the NRC under the existing legal framework.*
	Credits	*3 (three) ECVET.*