BOOSTING THE GREEN FUTURE
VIA UNIVERSITY MICRO-CREDENTIALS
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DELIVERABLE 2.3

List of Recommended Standards for Micro-Credentials Development

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Authors and Collaborators	
BULGARIA	
BULGARSKI INSTITUT ZA STANDARTIZACIA /BDS/ - Author	БДС
ROMANIA	
ASOCIATIA DE STANDARDIZARE DIN ROMANIA /ASRO/ - Author	asro ORGANISMUL NAȚIONAL DE STANDARDIZARE

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I. INTRODUCTION

This document presents a final list of standards which to be further considered for the development of the micro-credential courses under WP 3 of the project "Boosting the green future via university micro-credentials" /B-Green-ED/. The final list of standards was selected and recommended by the standardization bodies involved in the project (BDS and ASRO) based on the scientific domains and directions for the development of micro-credential university courses aiming to improve the competencies and skills set of the trainees for their successful inclusion in the green and sustainable economy which were specified during the final phase of the Work Package no.2 - Research.

BDS and ASRO recommended the final selection be limited to up to 5 primary standards per domain so that they can be adequately addressed in the MCC. If more than 5 standards are selected, it is recommended some of the standards to be only briefly described or used as an additional learning/optional material. The Universities made up their decision after surveying the stakeholders and with the support of the BDS and ASRO.

II. List of Recommended Standards for Micro-Credentials Development

To facilitate the planning of the MCCs under WP 3 the final list of standards provides additional information, which includes the number of pages of each standard, as well as the level of difficulty.

The level of difficulty is defined as follows:

Low (L) - does not require prior knowledge in standardization

Medium (M) – requires some knowledge in standardization

High (H) - requires good prior knowledge in standardization

COURSE: CIRCULAR ECONOMY BUSINESS MODELS (BFU)									
	Standard's Reference	**Standard's Title**	**Scope**	**European**	**International**	**European and International**	**ICS code and Description**	**Level of Difficulty**	**# pages in English**
1.	**CLC/TR 45550:2020**	**Definitions related to material efficiency**	Standardization Request M/543 requires the following: "Definition of parameters and methods relevant for assessing durability, upgradability and ability to repair, re-use and re-manufacture of products". Hence, this Technical Report "Definitions related to material efficiency" will constitute a collection of common terms used in deliverables prepared in accordance with M/543. The purpose of such a collection is to provide a single definition of key terms used in different deliverables from the CEN-CENELEC TC10. The source of the terms and definitions can be documents developed in the various working groups of the CEN-CENELEC TC10 or any text	√			01.040.13 - Environment. Health protection. Safety (Vocabularies) 13.020.20 - Environmental economics. Sustainability A-Deviation(s)	**L**	**20**

			referenced by such documents. In case of discrepancies between multiple definitions for the same term, this Technical report will recommend a preferred definition.						
2.	**EN 45555:2019**	**General methods for assessing the recyclability and recoverability of energy-related products.**	This European standard (EN) provides a general methodology for: - Assessing the recyclability of energy related products - Assessing the recoverability of energy related products - Assessing the ability to access or remove certain components or assemblies from energy related products to facilitate their potential for recycling or other recovery operations. - Assessing the recyclability of critical raw materials from energy related products. This EN will elaborate on recyclability and recoverability in a horizontal, cross-product way. However, a correct assessment can only be done in a product-specific way, taking into account specific parameters of a specific product group. This standard will define a series of parameters which may be considered to calculate product specific recycling and recoverability rates.	√			13.020.20 - Environmental economics. Sustainability	**H**	**25**
3.	**EN ISO 14006:2020**	**Environmental management systems - Guidelines for incorporating eco-design (ISO 14006:2020)**	This document gives guidelines for assisting organizations in establishing, documenting, implementing, maintaining and continually improving their management of ecodesign as part of an environmental management system (EMS). This document is intended to be used by organizations that have implemented an EMS in accordance with ISO 14001, but it can also help in integrating ecodesign using other management systems. The guidelines are			√	03.100.70 - Management systems 13.020.10 - Environmental management	**M**	**32**

			applicable to any organization regardless of its type, size or product(s) provided. This document is applicable to product-related environmental aspects and activities that an organization can control and those it can influence. This document does not establish specific environmental performance criteria.						
4.	**EN 45554:2020**	**General methods for the assessment of the ability to repair, reuse and upgrade energy-related products.**	This standard will fulfil requirements in Standardization request M/543 by defining parameters and methods relevant for assessing the ability to repair and reuse products; the ability to upgrade products, excluding remanufacturing; the ability to access or remove certain components, consumables or assemblies from products to facilitate repair, reuse or upgrade and lastly by defining reusability indexes or criteria.	√				**M**	**30**
COURSE: ELECTRONICS AND COMMUNICATION OF RENEWABLE ENERGY SOURCES (BFU)									
1.	**EN ISO/IEC 13273-2:2015**	**Energy efficiency and renewable energy sources — Common international terminology — Part 2: Renewable energy sources**	ISO/IEC 13273-2:2015 contains transversal concepts and their definitions in the subject field of renewable energy sources. This horizontal standard is primarily intended for use by technical committees in the preparation of standards in accordance with the principles laid down in IEC Guide 108.			√	27.015 Energy and heat transfer engineering Energy efficiency. Energy conservation in general	**H**	**10**
2.	**EN ISO 50001:2018**	**Energy management systems - Requirements**	This document specifies requirements for establishing, implementing, maintaining and improving an energy management system (EnMS). The intended outcome is			√	03.100.70 Services. company organization,	**H**	**30**

		with guidance for use-	to enable an organization to follow a systematic approach in achieving continual improvement of energy performance and the EnMS.				management and quality. administration. transport Management systems 27.015 Energy and heat transfer engineering Energy efficiency. Energy conservation in general		
3.	**EN IEC 62934:2021**	**Grid integration of renewable energy generation - Terms and definitions -**	IEC 62934:2021 provides terms and definitions in the subject area of grid integration of renewable energy generation. The technical issues of grid integration mainly focus on the issues caused by renewable energy generation with variable sources and/or converter based technology, such as wind power and photovoltaic power generation. Some renewable energy generations such as hydro power and biomass power with a relatively continuously available primary energy source and a rotating generator are conventional sources of generation, and are therefore not covered in this document.			√	29.02 Electrical engineering in general 27.01 Energy and heat transfer engineering in general 27.010 Energy and heat transfer engineering Energy and heat transfer engineering in general	**H**	**38**
COURSE: ENGINEERING AND EXPLOITATION OF ENERGY SYSTEMS (BFU)									
1.	**EN ISO 50001:2018**	**Energy management systems - Requirements with guidance for use.**	This document specifies requirements for establishing, implementing, maintaining and improving an energy management system (EnMS). The intended outcome is to enable an organization to follow a systematic approach in achieving			√	03.100.70 Services. company organization, management and quality.	**H**	**30**

			continual improvement of energy performance and the EnMS.				administration. transport Management systems 27.015 Energy and heat transfer engineering Energy efficiency. Energy conservation in general		
2.	**EN IEC 62933-1:2018**	**Electrical energy storage (EES) systems - Part 1: Vocabulary.**	Defines terms applicable to electrical energy storage (EES) systems including terms necessary for the definition of unit parameters, test methods, planning, installation, safety and environmental issues. This terminology document is applicable to grid-connected systems able to extract electrical energy from an electric power system, store it internally, and inject electrical power to an electric power system. The step for charging and discharging an EES system may comprise an energy conversion.			√	01.040.17 Terminology. Metrology and measurement. Physical phenomena	**H**	**35**
3.	**EN ISO/IEC 13273-2:2015**	**Energy efficiency and renewable energy sources — Common international terminology — Part 2: Renewable energy sources**	ISO/IEC 13273-2:2015 contains transversal concepts and their definitions in the subject field of renewable energy sources. This horizontal standard is primarily intended for use by technical committees in the preparation of standards in accordance with the principles laid down in IEC Guide 108.			√	27.015 Energy and heat transfer engineering Energy efficiency. Energy conservation in general	**H**	**10**

COURSE: ANDRAGOGICAL TECHNOLOGIES AND SAFE ENVIRONMENT (MRU)									
		General information regarding the standards and standardization						**L**	**N/A**
1.	**EN ISO 56000:2021**	**Innovation management - Fundamentals and vocabulary (ISO 56000:2020)**	1.1 This document provides the vocabulary, fundamental concepts and principles of innovation management and its systematic implementation. It is applicable to: a) organizations implementing an innovation management system or performing innovation management assessments; b) organizations that need to improve their ability to effectively manage innovation activities; c) users, customers and other relevant interested parties (e.g. suppliers, partners, funding organizations, investors, universities and public authorities) seeking confidence in the innovation capabilities of an organization; d) organizations and interested parties seeking to improve communication through a common understanding of the vocabulary used in innovation management; e) providers of training in, assessment of, or consultancy for, innovation management and innovation management systems;			√	01.040.03 - Vocabularies - Services. Company organization, management and quality. Administration. Transport. Sociology 03.100.01 - Company organization and management in general 03.100.40 - Company organization and management - Research and development	**M**	**37**

			f) developers of innovation management and related standards. 1.2 This document is intended to be applicable to: a) all types of organizations, regardless of type, sector, maturity-level or size; b) all types of innovations, e.g. product, service, process, model and method, ranging from incremental to radical; c) all types of approaches, e.g. internal and open innovation, user-, market-, technology- and design-driven innovation activities. This document specifies the terms and definitions applicable to all innovation management and innovation management system standards developed by ISO/TC 279.						
2.	**ISO 21001:2018**	**Educational organizations — Management systems for educational organizations — Requirements with guidance for use**	ISO 21001:2018 specifies requirements for a management system for educational organizations (EOMS) when such an organization: a) needs to demonstrate its ability to support the acquisition and development of competence through teaching, learning or research; b) aims to enhance satisfaction of learners, other beneficiaries and staff through the effective application of its EOMS, including processes for improvement of the system and assurance of conformity to the requirements of learners and other beneficiaries. All requirements of ISO 21001:2018 are generic and intended to be applicable to any organization that uses a curriculum to support the development of		√		03.180 - Education 03.100.70 - Company organization and management - Management systems	**M**	**63**

			competence through teaching, learning or research, regardless of the type, size or method of delivery. ISO 21001:2018 can be applied to educational organizations within larger organizations whose core business is not education, such as professional training departments. ISO 21001:2018 does not apply to organizations that only produce or manufacture educational products.						
3.	**EN ISO 14040:2006**	**Environmental management — Life cycle assessment — Principles and framework**	ISO 14040:2006 describes the principles and framework for life cycle assessment (LCA) including: definition of the goal and scope of the LCA, the life cycle inventory analysis (LCI) phase, the life cycle impact assessment (LCIA) phase, the life cycle interpretation phase, reporting and critical review of the LCA, limitations of the LCA, the relationship between the LCA phases, and conditions for use of value choices and optional elements. ISO 14040:2006 covers life cycle assessment (LCA) studies and life cycle inventory (LCI) studies. It does not describe the LCA technique in detail, nor does it specify methodologies for the individual phases of the LCA. The intended application of LCA or LCI results is considered during definition of the goal and scope, but the application itself is outside the scope of this International Standard.			√	ICS : 13.020.10 Environmental management 13.020.60 Product life-cycles	**M**	**20**
COURSE: SOCIAL RESPONSIBILITY AND CAREER MANAGEMENT (MRU)									

		General information regarding the standards and standardization						**L**	**N/A**
1.	**ISO 26000:2010 (and EN ISO 26000:2020)**	**Guidance on social responsibility (ISO 26000:2010)**	ISO 26000:2010 provides guidance to all types of organizations, regardless of their size or location, on: concepts, terms and definitions related to social responsibility; the background, trends and characteristics of social responsibility; principles and practices relating to social responsibility; the core subjects and issues of social responsibility; integrating, implementing and promoting socially responsible behaviour throughout the organization and, through its policies and practices, within its sphere of influence; identifying and engaging with stakeholders; and communicating commitments, performance and other information related to social responsibility. ISO 26000:2010 is intended to assist organizations in contributing to sustainable development. It is intended to encourage them to go beyond legal compliance, recognizing that compliance with law is a fundamental duty of any organization and an essential part of their social responsibility. It is intended to promote common understanding in the field of social responsibility, and to complement other instruments and initiatives for social responsibility, not to			√	03.100.02 - Company organization and management - Governance and ethics	**M**	**106**

			replace them. In applying ISO 26000:2010, it is advisable that an organization take into consideration societal, environmental, legal, cultural, political and organizational diversity, as well as differences in economic conditions, while being consistent with international norms of behaviour. ISO 26000:2010 is not a management system standard. It is not intended or appropriate for certification purposes or regulatory or contractual use. ISO 26000:2010 is intended to provide organizations with guidance concerning social responsibility and can be used as part of public policy activities.						
2.	**ISO 21500:2021**	**Project, programme and portfolio management — Context and concepts**	This document specifies the organizational context and underlying concepts for undertaking project, programme and portfolio management. It also provides guidance for organizations to adopt or improve project, programme and portfolio management using the standards prepared by ISO/TC 258. This document is applicable to most organizations, including public and private organizations and it is not dependent on the size and type of the organization. It is also applicable to any project, programme and portfolio, regardless of complexity, size or duration. Further guidance on project, programme and portfolio management, and the governance thereof, is given in ISO 21502, ISO 21503, ISO 21504 and ISO 21505.		√		03.100.40 - Company organization and management - Research and development	**M**	**12**

3.	**ISO 31073:2022**	**Risk management — Vocabulary**	This document defines generic terms related to the management of risks faced by organizations.		√		ICS : 01.040.03 Services. Company organization, management and quality. Administration. Transport. Sociology. (Vocabularies) 03.100.01 Company organization and management in general	**M**	**10**
4.	**EN ISO 14001:2015**	**Environmental management systems - Requirements with guidance for use (ISO 14001:2015)**	ISO 14001:2015 specifies the requirements for an environmental management system that an organization can use to enhance its environmental performance. ISO 14001:2015 is intended for use by an organization seeking to manage its environmental responsibilities in a systematic manner that contributes to the environmental pillar of sustainability. ISO 14001:2015 helps an organization achieve the intended outcomes of its environmental management system, which provide value for the environment, the organization itself and interested parties. Consistent with the organization's environmental policy, the intended outcomes of an environmental management system include: · enhancement of environmental performance; · fulfilment of compliance obligations; · achievement of environmental			X	13.020.10 - Environmental protection- Environmental management 03.100.70 - Company organization and management - Management systems	**M**	**35**

			objectives. ISO 14001:2015 is applicable to any organization, regardless of size, type and nature, and applies to the environmental aspects of its activities, products and services that the organization determines it can either control or influence considering a life cycle perspective. ISO 14001:2015 does not state specific environmental performance criteria. ISO 14001:2015 can be used in whole or in part to systematically improve environmental management. Claims of conformity to ISO 14001:2015, however, are not acceptable unless all its requirements are incorporated into an organization's environmental management system and fulfilled without exclusion.						
COURSE: SOCIAL RESPONSIBILITY IN FAMILY WORK (MRU)									
		General Information regarding the standards and standardization						**L**	**N/A**
1.	**ISO 26000:2010 (and EN ISO 26000:2020)**	**Guidance on social responsibility (ISO 26000:2010)**	ISO 26000:2010 provides guidance to all types of organizations, regardless of their size or location, on: concepts, terms and definitions related to social responsibility; the background, trends and characteristics of social responsibility; principles and practices relating to social responsibility; the core subjects and issues of social responsibility; integrating, implementing and promoting socially responsible behaviour			√	03.100.02 - Company organization and management - Governance and ethics	**M**	**106**

			throughout the organization and, through its policies and practices, within its sphere of influence; identifying and engaging with stakeholders; and communicating commitments, performance and other information related to social responsibility. ISO 26000:2010 is intended to assist organizations in contributing to sustainable development. It is intended to encourage them to go beyond legal compliance, recognizing that compliance with law is a fundamental duty of any organization and an essential part of their social responsibility. It is intended to promote common understanding in the field of social responsibility, and to complement other instruments and initiatives for social responsibility, not to replace them. In applying ISO 26000:2010, it is advisable that an organization take into consideration societal, environmental, legal, cultural, political and organizational diversity, as well as differences in economic conditions, while being consistent with international norms of behavior. ISO 26000:2010 is not a management system standard. It is not intended or appropriate for certification purposes or regulatory or contractual use. ISO 26000:2010 is intended to provide organizations with guidance concerning social responsibility and can be used as part of public policy activities.						

2.	**IWA 34:2021**	**Women's entrepreneurship — Key definitions and general criteria**	This document establishes a set of common definitions related to women's entrepreneurship, such as those for women-owned business and women-led business. This document also defines women-led cooperatives and women-led informal enterprises. These definitions can be used, for example, in women's economic empowerment programmes (such as procurement and trade programmes) and for the collection of internationally comparable data on women's entrepreneurship (including the impact on local and national economies). This document also provides criteria for evaluating important factors related to these definitions, such as ownership, management, and control, as well as how to handle dilution by investment. NOTE If an enterprise cannot be categorized according to the definitions given in this document, it does not necessarily mean that the enterprise is male-owned or male-led. This document does not provide recommendations on how to initiate programmes based on the definitions and criteria, for example on public procurement. In addition, this document does not address issues such as how to promote conformity assessment.		√		ICS : 01.040.03 Services. Company organization, management and quality. Administration. Transport. Sociology. (Vocabularies) 03.100.01 Company organization and management in general	**L**	**16**
COURSE: RISK MANAGEMENT IN BIOECONOMY (LSU)									

1.	**ISO 31000:2018**	**Risk management — Guidelines**	ISO 31000:2018 provides guidelines on managing risk faced by organizations. The application of these guidelines can be customized to any organization and its context. ISO 31000:2018 provides a common approach to managing any type of risk and is not industry or sector specific. ISO 31000:2018 can be used throughout the life of the organization and can be applied to any activity, including decision-making at all levels.		√		ICS : 03.100.01 Company organization and management in general	**M**	**16**
2.	**ISO 31073:2022**	**Risk management — Vocabulary**	This document defines generic terms related to the management of risks faced by organizations.		√		ICS : 01.040.03 Services. Company organization, management and quality. Administration. Transport. Sociology. (Vocabularies) 03.100.01 Company organization and management in general	**M**	**10**
3.	**IEC 31010:2019 (and EN IEC 31010:2019)**	**Risk management — Risk assessment techniques**	IEC 31010:2019 is published as a double logo standard with ISO and provides guidance on the selection and application of techniques for assessing risk in a wide range of situations. The techniques are used to assist in making decisions where there is uncertainty, to provide information about particular risks and as			√	ICS : 03.100.01 Company organization and management in general	**M**	**132**

			part of a process for managing risk. The document provides summaries of a range of techniques, with references to other documents where the techniques are described in more detail. This second edition cancels and replaces the first edition published in 2009. This edition constitutes a technical revision. This edition includes the following significant technical changes with respect to the previous edition: • more detail is given on the process of planning, implementing, verifying and validating the use of the techniques; • the number and range of application of the techniques has been increased; • the concepts covered in ISO 31000 are no longer repeated in this standard. Keywords: uncertainty, risk management						
4.	**IWA 31:2020**	**Risk management — Guidelines on using ISO 31000 in management systems.**	This document gives guidelines for integrating and using ISO 31000 in organizations that have implemented one or more ISO and IEC Management System Standards (MSS), or that have decided to undertake a project implementing one or more MSS incorporating ISO 31000. This document explains how the clauses of ISO 31000 relate to the high level structure (HLS) for MSS. This document does not provide guidance on implementing a management system in general. It does not specify requirements of a MSS. It does not provide a summary of ISO 31000; however, it does, as explained above, provide the background for understanding ISO 31000. Using this		√		ICS : 03.100.01 Company organization and management in general	**M**	**14**

			document does not remove the need to use other standards to address specific aspects of risk.						
5.	**EN ISO 22005:2007**	**Traceability in the feed and food chain — General principles and basic requirements for system design and implementation**	ISO 22005:2007 gives the principles and specifies the basic requirements for the design and implementation of a feed and food traceability system. It can be applied by an organization operating at any step in the feed and food chain. It is intended to be flexible enough to allow feed organizations and food organizations to achieve identified objectives. The traceability system is a technical tool to assist an organization to conform with its defined objectives, and is applicable when necessary to determine the history or location of a product or its relevant components.			√	ICS : 67.040 Food products in general	**H**	**8**
COURSE: CARBON FOOTPRINT ASSESSMENT (LSU)									
1.	**IWA 42:2022**	**Net zero guidelines**	This document provides guiding principles and recommendations to enable a common, global approach to achieving net zero greenhouse gas emissions through alignment of voluntary initiatives and adoption of standards, policies and national and international regulation. This document provides guidance on what governance organizations and other organizations can do to effectively contribute to global efforts to limit warming to 1,5 °C by achieving net zero		√		ICS : 13.020.40 Pollution, pollution control and conservation	**H**	**37**

			no later than 2050. It provides guidance on a common and equitable contribution and recognizes the capability of individual organizations in contributing to achieving global net zero. This document, when used in combination with applicable science-based pathways, provides guidance for organizations seeking to set robust climate strategies.						
2.	**EN ISO 14067: 2018**	**Greenhouse gases — Carbon footprint of products — Requirements and guidelines for quantification**	This document specifies principles, requirements and guidelines for the quantification and reporting of the carbon footprint of a product (CFP), in a manner consistent with International Standards on life cycle assessment (LCA) (ISO 14040 and ISO 14044). Requirements and guidelines for the quantification of a partial CFP are also specified. This document is applicable to CFP studies, the results of which provide the basis for different applications (see Clause 4). This document addresses only a single impact category: climate change. Carbon offsetting and communication of CFP or partial CFP information are outside the scope of this document. This document does not assess any social or economic aspects or impacts, or any other environmental aspects and related impacts potentially arising from the life cycle of a product.			√	ICS : 13.020.40 Pollution, pollution control and conservation	**H**	**46**
3.	**EN ISO 22526-1:2021**	**Plastics — Carbon and environmental footprint of**	This document specifies the general principles and the system boundaries for the carbon and environmental footprint of biobased plastic products. It is an			√	ICS : 13.020.40 Pollution, pollution control and conservation	**H**	**7**

		biobased plastics — Part 1: General principles	introduction and a guidance document to the other parts of the ISO 22526 series. This document is applicable to plastic products and plastic materials, polymer resins, which are based from biobased or fossil-based constituents.				83.080.01 Plastics in general		
4.	**EN ISO 14090:2019**	**Adaptation to climate change - Principles, requirements and guidelines**	This document specifies principles, requirements and guidelines for adaptation to climate change. This includes the integration of adaptation within or across organizations, understanding impacts and uncertainties and how these can be used to inform decisions. This document is applicable to any organization, regardless of size, type and nature, e.g. local, regional, international, business units, conglomerates, industrial sectors, natural resource management units. This document can support the development of sector-, aspect- or element-specific climate change adaptation standards.			√	13.020.40 - Environmental protection - Pollution, pollution control and conservation Including ecotoxicology and greenhouse gas emissions	**M**	**16**
5.	**EN ISO 14091:2021**	**Adaptation to climate change — Guidelines on vulnerability, impacts and risk assessment**	This document gives guidelines for assessing the risks related to the potential impacts of climate change. It describes how to understand vulnerability and how to develop and implement a sound risk assessment in the context of climate change. It can be used for assessing both present and future climate change risks. Risk assessment according to this document provides a basis for climate change adaptation planning, implementation, and monitoring and			√	ICS : 13.020.30 Environmental impact assessment 13.020.40 Pollution, pollution control and conservation	**M**	**39**

			evaluation for any organization, regardless of size, type and nature.						
COURSE: BIOMASS AND GOOD PRACTICES IN THE MANAGEMENT OF DEGRADED AND DECERTIFIED LANDS (LSU)									
1.	**EN ISO 17225-1:2021**	**Solid biofuels**	This document determines the fuel quality classes and specifications for solid biofuels of raw and processed materials originating from a) forestry and arboriculture; b) agriculture and horticulture; c) aquaculture. Chemically treated material may not include halogenated organic compounds or heavy metals at levels higher than those in typical virgin material values (see Annex B) or higher than typical values of the country of origin. NOTE Raw and processed material includes woody, herbaceous, fruit, aquatic biomass and biodegradable waste originating from above sectors. NOMARTIVES REFERENCES: ISO 14780, Solid biofuels — Sample preparation ISO 16559, Solid biofuels — Terminology, definitions and descriptions ISO 16948, Solid biofuels — Determination of total content of carbon, hydrogen and nitrogen ISO 16967, Solid biofuels — Determination of major elements — Al, Ca, Fe, Mg, P, K, Si, Na and Ti ISO 16968, Solid biofuels — Determination of minor elements ISO 16993, Solid biofuels — Conversion of analytical results from one basis to			√	ICS : 27.190 Biological sources and alternative sources of energy 75.160.40 Biofuels	**H**	**63**

			another ISO 16994, Solid biofuels — Determination of total content of sulfur and chlorine ISO 17827-1, Solid biofuels — Determination of particle size distribution for uncompressed fuels — Part 1: Oscillating screen method using sieves with apertures of 3,15 mm and above ISO 17827-2, Solid biofuels — Determination of particle size distribution for uncompressed fuels — Part 2: Vibrating screen method using sieves with aperture of 3,15 mm and below ISO 17828, Solid biofuels — Determination of bulk density ISO 17829, Solid Biofuels — Determination of length and diameter of pellets ISO 17830, Solid biofuels — Particle size distribution of disintegrated pellets ISO 17831-1, Solid biofuels — Determination of mechanical durability of pellets and briquettes — Part 1: Pellets ISO 17831-2, Solid biofuels — Determination of mechanical durability of pellets and briquettes — Part 2: Briquettes ISO 18122, Solid biofuels — Determination of ash content ISO 18123, Solid biofuels — Determination of the content of volatile matter ISO 18125, Solid biofuels — Determination of calorific value ISO 18134-1, Solid biofuels — Determination of moisture content — Oven dry method — Part 1: Total						

			moisture — Reference method ISO 18134-2, Solid biofuels — Determination of moisture content — Oven dry method — Part 2: Total moisture — Simplified method ISO 18135, Solid Biofuels — Sampling ISO 18847, Solid biofuels — Determination of particle density of pellets and briquettes ISO 21945, Solid biofuels — Simplified sampling method for small scale applications ISO 21404, Solid biofuels — Determination of ash melting behaviour ISO 18846, Solid biofuels — Determination of fines content in quantities of pellets						
2.	**ISO 17828:2015 (and EN ISO 17828:2015)**	**Solid biofuels — Determination of bulk density**	ISO 17828:2015 defines a method of determining bulk density of solid biofuels by the use of a standard measuring container. This method is applicable to all pourable solid biofuels with a nominal top size of maximum 100 mm. Bulk density is not an absolute value; therefore, conditions for its determination have to be standardized in order to gain comparative measuring results. NOTE Bulk density of solid biofuels is subject to variation due to several factors such as vibration, shock, pressure, biodegradation, drying, and wetting. Measured bulk density can therefore deviate from actual conditions during transportation, storage, or transhipment.			√	ICS : 27.190 Biological sources and alternative sources of energy 75.160.40 Biofuels	**H**	**8**

3.	**EN ISO 18135:2017**	**Solid Biofuels — Sampling**	ISO 18135:2017 describes methods for preparing sampling plans and certificates, as well as taking samples of solid biofuels, for example, from the place where the raw materials grow, from production plant, from deliveries, e.g. lorry loads, or from stock. It includes both manual and mechanical methods, and is applicable to solid biofuels that are either: - fine (particle sizes up to about 10 mm) and regularly shaped particulate materials that can be sampled using a scoop or pipe, for example, sawdust, olive stones and wood pellets; - coarse or irregularly shaped particulate materials (particle sizes up to about 200 mm) that can be sampled using a fork or shovel, for example, wood chips and nut shells, forest residue chips, and straw; - baled materials, for example, baled straw or grass; - large pieces (particle sizes above 200 mm) that are either picked manually or automatically; - vegetable waste, fibrous waste from virgin pulp production and from production of paper from pulp that has been dewatered; - thermally treated and densified biomass materials; - roundwood. ISO 18135:2017 is not applicable to airborne dust from solid biofuels. It may be possible to use this document for other solid biofuels.			√	ICS : 27.190 Biological sources and alternative sources of energy 75.160.40 Biofuel	**H**	**58**

			The methods described in this document may be used, for example, when the samples are to be tested for moisture content, ash content, calorific value, bulk density, durability, particle size distribution, ash melting behaviour and chemical composition.						
4.	**ISO 14055-1:2017**	**Environmental management — Guidelines for establishing good practices for combatting land degradation and desertification — Part 1: Good practices framework**	ISO 14055-1:2017 provides guidelines for establishing good practices in land management to prevent or minimize land degradation and desertification. It does not include management of coastal wetlands. ISO 14055-1:2017 defines a framework for identifying good practices in land management, based on assessment of the drivers of land degradation and risks associated with current and past practices. Guidance on monitoring and reporting implementation of good practices is also provided. ISO 14055-1:2017 is intended for use by private and public sector organizations with responsibility for land management and will allow an organization to communicate implementation of good practices.		√		ICS : 13.020.01 Environment and environmental protection in general	**M**	**31**
5.	**ISO/TR 14055-2:2022**	**Environmental management — Guidelines for establishing good practices for combatting land degradation**	This document provides regional case studies of good practices in land management to prevent or minimize land degradation and desertification in support of ISO 14055-1:2017. The case studies are presented to facilitate the application of ISO 14055-1 across a wide of range of geographical and local conditions.		√		ICS : 13.020.01 Environment and environmental protection in general	**M**	**74**

		and desertification — Part 2: Regional case studies.	NOTE The cases studies are presented as different ways of applying good practice and do not preclude alternative ways of applying good practices in accordance with ISO 14055-1.						
COURSE: QUALITY MANAGEMENT SYSTEMS (UPV)									
1.	**ISO 9000:2015 (and EN ISO 9000:2015)**	**Quality management systems – Fundamentals and vocabulary**	ISO 9000:2015 describes the fundamental concepts and principles of quality management which are universally applicable to the following: organizations seeking sustained success through the implementation of a quality management system; customers seeking confidence in an organization's ability to consistently provide products and services conforming to their requirements; organizations seeking confidence in their supply chain that their product and service requirements will be met; organizations and interested parties seeking to improve communication through a common understanding of the vocabulary used in quality management; organizations performing conformity assessments against the requirements of ISO 9001; providers of training, assessment or advice in quality management; developers of related standards. ISO 9000:2015 specifies the terms and definitions that apply to all quality management and quality management			√	ICS : 01.040.03 Services. Company organization, management and quality. Administration. Transport. Sociology. (Vocabularies) 03.120.10 Quality management and quality assurance	**M**	**51**

			system standards developed by ISO/TC 176.						
2.	**ISO 9001:2015 (and EN ISO 9001:2015)**	**Quality management systems – Requirements**	ISO 9001:2015 specifies requirements for a quality management system when an organization: a) needs to demonstrate its ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements, and b) aims to enhance customer satisfaction through the effective application of the system, including processes for improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements. All the requirements of ISO 9001:2015 are generic and are intended to be applicable to any organization, regardless of its type or size, or the products and services it provides.			√	ICS : 03.100.70 Management systems 03.120.10 Quality management and quality assurance	**M**	**29**
3.	**ISO 9004:2018 (EN ISO 9004:2018)**	**Quality management – Quality of an organization – Guidance to achieve sustained success**	ISO 9004:2018 gives guidelines for enhancing an organization's ability to achieve sustained success. This guidance is consistent with the quality management principles given in ISO 9000:2015. ISO 9004:2018 provides a self-assessment tool to review the extent to which the			√	ICS : 03.120.10 Quality management and quality assurance	**M**	**59**

			organization has adopted the concepts in this document. ISO 9004:2018 is applicable to any organization, regardless of its size, type and activity.						
4.	**ISO 10006:2017**	**Quality management – Guidelines for quality management in projects**	ISO 10006:2017 gives guidelines for the application of quality management in projects. It is applicable to organizations working on projects of varying complexity, small or large, of short or long duration, being an individual project to being part of a programme or portfolio of projects, in different environments, and irrespective of the kind of product/service or process involved, with the intention of satisfying project interested parties by introducing quality management in projects. This can necessitate some tailoring of the guidance to suit a particular project. ISO 10006:2017 is not a guide to project management itself. Guidance on quality in project management processes is presented in this document. Guidance on project management and related processes is covered in ISO 21500. ISO 10006:2017 addresses the concepts of both "quality management in projects" and "quality management systems in projects". These are distinguished by being addressed separately by the following topics and clauses:		√		ICS : 03.100.70 Management systems 03.120.10 Quality management and quality assurance	**M**	**34**

			- quality management in projects includes: quality management systems in projects (Clause 4); management responsibility in projects (Clause 5); resource management in projects (Clause 6); product/service realization in projects (Clause 7); and measurement, analysis and improvement in projects (Clause 8); - quality management systems in projects includes: project characteristics (4.1); quality management principles in projects (4.2); project quality management processes (4.3); and a quality plan for the project (4.4).						
5.	**ISO 10007:2007**	**Quality management – Guidelines for configuration management**	ISO 10007:2017 provides guidance on the use of configuration management within an organization. It is applicable to the support of products and services from concept to disposal.		√		ICS : 03.120.10 Quality management and quality assurance	**M**	**10**
6.	**ISO 18091:2019**	**Quality management – Guidelines for the application of ISO 9001 in local government**	This International Standard specifies requirements for a quality management system when an organization: a) needs to demonstrate its ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements, and b) aims to enhance customer satisfaction through the effective application of the system, including processes for improvement of the system and the assurance of conformity to customer and		√		ICS : 03.160 Law. Administration 03.100.70 Management systems	**M**	**73**

			applicable statutory and regulatory requirements. All the requirements of this International Standard are generic and are intended to be applicable to any organization, regardless of its type or size, or the products and services it provides. NOTE 1 In this International Standard, the terms "product" or "service" only apply to products and services intended for, or required by, a customer. NOTE 2 Statutory and regulatory requirements can be expressed as legal requirements. This document gives guidelines for local governments on understanding and implementing a quality management system that meets the requirements of ISO 9001:2015, in order to meet the needs and expectations of their customers/citizens and all other relevant interested parties by consistently providing them with products and services. It promotes implementing a quality management system in a responsible and accountable manner, through the application of ISO 9001 on a comprehensive basis. These guidelines do not add, change or modify the requirements of ISO 9001.						

			It is applicable to all local government processes at all levels (i.e. strategical, tactical-managerial and operational) in order to constitute a comprehensive quality management system that focuses on the local government achieving its objectives. The comprehensive character of this system is essential to ensure that all the areas of the local government have a specified level of reliability (i.e. effectiveness of the processes). Annex A, as a starting point for users of this document, gives a diagnostic methodology for local governments to evaluate the scope and maturity of their processes and products and services. Annex B gives the processes necessary to provide reliable products and services to customers/citizens.						
COURSE: ENVIRONMENTAL MANAGEMENT SYSTEMS (UPV)									
1.	**ISO 14001:2015 (and EN ISO 14001:2015)**	**Environmental management systems - Requirements with guidance for use**	ISO 14001:2015 specifies the requirements for an environmental management system that an organization can use to enhance its environmental performance. ISO 14001:2015 is intended for use by an organization seeking to manage its environmental responsibilities in a systematic manner that contributes to the environmental pillar of sustainability. ISO 14001:2015 helps an organization achieve the intended outcomes of its environmental management system, which provide value for the environment, the organization itself and interested parties.			√	13.020.10 - Environmental protection-Environmental management 03.100.70 - Company organization and management - Management systems	**M**	**35**

			Consistent with the organization's environmental policy, the intended outcomes of an environmental management system include: · enhancement of environmental performance; · fulfilment of compliance obligations; · achievement of environmental objectives. ISO 14001:2015 is applicable to any organization, regardless of size, type and nature, and applies to the environmental aspects of its activities, products and services that the organization determines it can either control or influence considering a life cycle perspective. ISO 14001:2015 does not state specific environmental performance criteria. ISO 14001:2015 can be used in whole or in part to systematically improve environmental management. Claims of conformity to ISO 14001:2015, however, are not acceptable unless all its requirements are incorporated into an organization's environmental management system and fulfilled without exclusion.						
2.	**ISO 14004:2016 (and EN ISO 14004:2016)**	**Environmental management systems - General guidelines on implementation**	ISO 14004:2016 provides guidance for an organization on the establishment, implementation, maintenance and improvement of a robust, credible and reliable environmental management system. The guidance provided is intended for an organization seeking to manage its environmental responsibilities in a systematic manner that contributes to the environmental pillar of sustainability.			√	13.020.10 - Environmental protection-Environmental management 03.100.70 - Company organization and management -	**M**	**59**

			This International Standard helps an organization achieve the intended outcomes of its environmental management system, which provides value for the environment, the organization itself and interested parties. Consistent with the organization's environmental policy, the intended outcomes of an environmental management system include: - enhancement of environmental performance; - fulfilment of compliance obligations; - achievement of environmental objectives. The guidance in this International Standard can help an organization to enhance its environmental performance, and enables the elements of the environmental management system to be integrated into its core business process. NOTE While the environmental management system is not intended to manage occupational health and safety issues, these can be included when an organization seeks to implement an integrated environmental and occupational health and safety management system. ISO 14004:2016 is applicable to any organization, regardless of size, type and nature, and applies to the environmental aspects of its activities, products and services that the organization determines it can either control or influence, considering a life cycle perspective. The guidance in this International				Management systems		

			Standard can be used in whole or in part to systematically improve environmental management. It serves to provide additional explanation of the concepts and requirements. While the guidance in this International Standard is consistent with the ISO 14001 environmental management system model, it is not intended to provide interpretations of the requirements of ISO 14001.						
3.	**ISO 14006:2020 (and EN ISO 14006:2020)**	**Environmental management systems - Guidelines for incorporating eco-design**	This document gives guidelines for assisting organizations in establishing, documenting, implementing, maintaining and continually improving their management of ecodesign as part of an environmental management system (EMS). This document is intended to be used by organizations that have implemented an EMS in accordance with ISO 14001, but it can also help in integrating ecodesign using other management systems. The guidelines are applicable to any organization regardless of its type, size or product(s) provided. This document is applicable to product-related environmental aspects and activities that an organization can control and those it can influence. This document does not establish specific environmental performance criteria.			√	03.100.70 - Management systems 13.020.10 - Environmental management	**M**	**30**
4.	**ISO 14031:2021 (and EN ISO 14031:2021)**	**Environmental management - Environmental performance evaluation - Guidelines**	ISO 14031:2013 gives guidance on the design and use of environmental performance evaluation (EPE) within an organization. It is applicable to all organizations, regardless of type, size, location and complexity.			√	ICS : 13.020.10 Environmental management	**M**	**38**

			ISO 14031:2013 does not establish environmental performance levels. The guidance in ISO 14031:2013 can be used to support an organization's own approach to EPE, including its commitments to compliance with legal and other requirements, the prevention of pollution, and continual improvement.						
5.	**ISO 14040:2006 (and EN ISO 14040:2006)**	**Environmental management - Life cycle assessment - Principles and framework**	ISO 14040:2006 describes the principles and framework for life cycle assessment (LCA) including: definition of the goal and scope of the LCA, the life cycle inventory analysis (LCI) phase, the life cycle impact assessment (LCIA) phase, the life cycle interpretation phase, reporting and critical review of the LCA, limitations of the LCA, the relationship between the LCA phases, and conditions for use of value choices and optional elements. ISO 14040:2006 covers life cycle assessment (LCA) studies and life cycle inventory (LCI) studies. It does not describe the LCA technique in detail, nor does it specify methodologies for the individual phases of the LCA. The intended application of LCA or LCI results is considered during definition of the goal and scope, but the application itself is outside the scope of this International Standard.			√	13.020.10 - Environmental management 13.020.60 - Product life-cycles	**M**	**38**
6.	**ISO 14044:2006 (and EN ISO 14044:2006)**	**Environmental management - Life cycle assessment - Requirements and guidelines**	ISO 14044:2006 specifies requirements and provides guidelines for life cycle assessment (LCA) including: definition of the goal and scope of the LCA, the life cycle inventory analysis (LCI) phase, the life cycle impact assessment (LCIA) phase, the life cycle interpretation phase, reporting and critical review of the LCA,			√	13.020.10 - Environmental management 13.020.60 - Product life-cycles	**M**	**46**

			limitations of the LCA, relationship between the LCA phases, and conditions for use of value choices and optional elements. ISO 14044:2006 covers life cycle assessment (LCA) studies and life cycle inventory (LCI) studies.						
COURSE: WASTE MANAGEMENT AND INDUSTRIAL POLLUTION CONTROL (UPV)									
1.	**ISO 24161:2022**	**Waste collection and transportation management — Vocabulary**	This document defines terms that are commonly used in the area of waste collection and transportation management. It aims to align with terminology used internationally.		√		ICS : 01.040.13 Environment. Health protection. Safety (Vocabularies) 13.030.01 Wastes in general	**L**	**15**
2.	**ISO 15270:2008**	**Guidelines for the recovery and recycling of plastics waste**	ISO 15270:2008 provides guidance for the development of standards and specifications covering plastics waste recovery, including recycling. The standard establishes the different options for the recovery of plastics waste arising from pre-consumer and post-consumer sources. It also establishes the quality requirements that should be considered in all steps of the recovery process, and provides general recommendations for inclusion in material standards, test standards and product specifications. Consequently, the process stages, requirements, recommendations and terminology presented in the standard are intended to be of general applicability.		√		ICS : 13.030.50 Recycling 83.080.01 Plastics in general	M	14
3.	**ISO 18601:2013 -**	**Packaging and the environment -**	ISO 18601:2013 specifies requirements and procedures for the other International Standards in this series on packaging and the environment: ISO		√		ICS : 55.020 Packaging and distribution of goods in general	**M**	**9**

		General principles	18602, ISO 18603, ISO 18604, ISO 18605, and ISO 18606. It is applicable to a supplier responsible for placing packaging or packaged goods on the market.				13.020.01 Environment and environmental protection in general		
4.	**ISO 18602:2013**	**Packaging and the environment - Handling and storage**	ISO 18602:2013 specifies requirements and a procedure for assessment of packaging to ensure that the weight or volume of its material content is optimized consistent with the functions of packaging. This is one of several options for reducing the impact of packaging on the environment. It also provides methodologies and procedures for determining the amount and minimization of substances or mixtures hazardous to the environment, and determining the amount of four heavy metals (lead, cadmium, mercury, hexavalent chromium) in packaging. The process for packaging design, including material selection, is not part of ISO 18602:2013. The procedure for applying ISO 18602:2013 is contained in ISO 18601.		√		ICS : 55.020 Packaging and distribution of goods in general 13.020.01 Environment and environmental protection in general	H	27
5.	**ISO 14064-1:2018 (and EN ISO 14064-1:2019)**	**Greenhouse gases - Part 1: Specification with guidance at the organization level for quantification**	This document specifies principles and requirements at the organization level for the quantification and reporting of greenhouse gas (GHG) emissions and removals. It includes requirements for the design, development, management, reporting and verification of an organization's GHG inventory.			√	ICS : 13.020.40 Pollution, pollution control and conservation	H	47

		and reporting of greenhouse gas emissions and removals	The ISO 14064 series is GHG programme neutral. If a GHG programme is applicable, requirements of that GHG programme are additional to the requirements of the ISO 14064 series.						
6.	**ISO 14064-2:2019 (and EN ISO 14064-2:2019)**	**Greenhouse gases - Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements**	This document specifies principles and requirements and provides guidance at the project level for the quantification, monitoring and reporting of activities intended to cause greenhouse gas (GHG) emission reductions or removal enhancements. It includes requirements for planning a GHG project, identifying and selecting GHG sources, sinks and reservoirs (SSRs) relevant to the project and baseline scenario, monitoring, quantifying, documenting and reporting GHG project performance and managing data quality. The ISO 14060 family of standards is GHG programme neutral. If a GHG programme is applicable, the requirements of that GHG programme are additional to the requirements of the ISO 14060 family of standards.			√	ICS : 13.020.40 Pollution, pollution control and conservation	M	**26**