Annex

The Subject Benchmark Statement of Management Information Systems

II Level of Higher Education

VLL Level of the National Qualifications

Framework

2024

I. Introduction

The Subject Benchmark Statement of Management Information Systems[1] is an academic education standard, the purpose of which is to determine the learning outcomes necessary to qualify for the second-level educational programmes of higher academic education in the field of management information systems, the minimum requirements for this, and the appropriate teaching-learning and assessment approaches necessary to achieve these outcomes.

The Subject Benchmark Statement of Management Information Systems shall be introduced:

1. To plan/implement Master's degree programmes in Management Information Systems for higher education institutions.
2. For the student/master's candidate who wants to know what competencies he/she will have after completing the Master's degree programme in Management Information Systems.
3. For an employer who determines what kind of competencies the labor market requires from a graduate and who wants to receive information about the competencies of a graduate of a master's educational programme;
4. For persons involved in the process of internal and external quality assurance, who are tasked with periodically evaluating educational programmes and determining compliance with applicable quality standards.

The subject benchmark statement describes the minimum learning outcomes, teaching-learning, assessment methods and other essential characteristics required for the award of a master's degree in management information systems. Provisions defined by the subject benchmark statement of management information systems, except the ones of the recommendatory nature (regarding teaching-learning, evaluation and resources), are mandatory to perform for all higher education institutions planning/implementing one-year or two-year master's degree programme(s) in the field of Management Information Systems.

Validity period of the subject benchmark statement is 7 years.

Name of the subject benchmark statement in English is: The Subject Benchmark Statement of Management Information Systems.

II. Description of the Field of Study

[1] The Subject Benchmark Statement -An intermediate document linking the National Qualifications Framework to an educational programme with the aim of ensuring the diversity and flexibility of educational programmes. It describes the minimum learning outcomes to be achieved by the holder of the qualification of relevant cycle and of the field of study / field.

The field of management information systems focuses on the integration of organizations' development strategy and management information systems. Its purpose is to make optimal/effective decisions through management information systems, implement the organization's strategy, strengthen information security and protection measures, manage modern digital technologies, simplify business processes, etc.

Management information systems specialist analyzes and evaluates management information systems in the organization, carries out business analysis, management of modern digital technologies, information security and protection, database management and project management with information technologies.

The higher education programme of the master's level of management information systems shall provide the development of in-depth knowledge, skills, responsibility and autonomy within the directions indicated below:

1) **Organization management and organizational environment:** Strategic management of the organization, policy, management of technological innovations. Social, economic, cultural, legal and technological environment of the organization.
2) **Analysis of management information systems in the organization**: Evaluation of management information systems, management and formation of development strategies, promotion of innovation introduction, modeling and optimization of business processes, business analysis, management of organizational changes in a technological environment.
3) **Management of databases in organizations:** Effective management of databases in organizations (data collection, cleaning, interpretation, data analysis tools, use of statistical methods, cloud databases, etc.), database management systems.
4) **Information security and protection**: Data protection in organizations, network and application security, user authorization and authentication management, continuity planning in case of incidents, risk management, raising employee awareness of security issues, etc.
5) **Information technologies in project management**: IT project management in organizations (planning, resource allocation, execution, monitoring, risk analysis, quality management and project completion). Software used to manage projects.
6) **Modern digital technologies in organizations**: Impact assessment of modern digital technologies (artificial intelligence (AI), machine learning (ML), blockchain technology, Internet of Things (IoT), etc.) in organizations and their strategic management advantage.

III. Learning outcomes

The learning outcomes provided by the subject benchmark statement of management information systems are aimed at the acquisition/development of the knowledge, skills and responsibilities/values that the graduate is required to have upon completion of the master's level. The learning outcomes given in the subject benchmark consider the minimum requirements. HEI can, taking into account the best international practices and modern achievements/experiences of the field, determine other outcomes by the educational programme.

Learning outcomes required to acquire a Master's degree:

After completing the one-year/two-year master's education programme in the field of study of management information systems, the graduate:

Knowledge and Understanding:

1. Deeply and systematically elaborates modern concepts, theories, approaches and models of managing information systems (design, implementation, use, development), evaluation and analysis related to the activities of organizations and institutions for effective support of organizational processes.
2. Critically and argumentatively discusses the organization's strategic management and policy. Also, develops the capability of using management information systems in the social, economic, cultural, legal and technological environment.

Skills:

1. Uses management information systems to make original and effective decisions in the organization;
2. Manages organizational processes using information technologies (information security and protection, database and project management, etc.);
3. Evaluates impact of modern digital technologies (artificial intelligence (AI), Internet of Things (IoT), machine learning (ML), blockchain technology, etc.) on organizational processes;
4. Independently conducts research typical for the field of management information systems (master's project/ thesis or scientific project/ thesis or professional (practical) project);
5. Effectively presents (oral, written and/or electronically) research outcomes, findings, arguments and conclusions in the field of management information systems in accordance with the principles of academic integrity and ethics to both the academic and professional community and stakeholders.

Responsibility and Autonomy:

1. Determines strategies and ways of adapting management information systems to

the learning and/or work environment.

2. Independently identifies further learning and development needs;

IV. Qualification to be awarded

Graduates may be awarded one of the following qualifications within the framework of the relevant master's education programmes in the field of study of management information systems:

a) The formulation of the qualification is determined based on the content, structure and goals of the educational programme. The Master's qualification with reference to the detailed field of study is awarded to graduates of Master's education programmes where the emphasis is on practice and the development of practical skills in the profession.

In the case of the master's educational programmes with at least 120 credits:

- Master of Management Information Systems
- Master of Business Administration in Management Information Systems

In the case of the master's educational programmes with at least 60 credits:

- Master of Management Information Systems (effective after changes in legislation)
- Executive Master of Business Administration in Management Information Systems

b) If the master's education programme corresponding to the field of study of management information systems is focused on humanities, social sciences and the theoretical study of business management in general, the qualification to be awarded can be formulated as:

- Master of Arts in Management Information Systems

c) If the goal of the 7th level educational programme corresponding to the field of business administration is focused on developing scientific-research skills for graduates, in this case the qualification can be formulated in the following form:

- Master of Science in Management Information Systems

V. Teaching, Learning and Evaluation

The teaching-learning and assessment methods provided in this Subject Benchmark Statement have a recommendatory nature and are based on the principles of student-centered teaching.

The teaching, learning and assessment methods should contribute to the achievement of the learning outcomes of the educational programme, mastering of specific material and also the development of the student's transferable skills. The teaching-learning methods and the assessment approaches and criteria assigned to them should enable the demonstration of the student's learning outcomes and general relevance to the subject benchmark statement. This shall include the commitment and opportunity for in-depth feedback from the academic and invited staff of the educational institution to the students. The methods listed above are the most common forms of teaching-learning and assessment, however, the curriculum may include only some of them and other methods as well. Higher Education Institutions should continuously review and update their teaching-learning and assessment methods by sharing/implementing best practices in teaching and assessment and development of management-related competencies.

Forms of teaching in the field of management information systems are carried out by the following common methods of student-oriented teaching:

- Verbal Method;
- Demonstrate method;
- Presentation;
- Practical work;
- Group Work;
- Project Based Study;
- Problem Based Study
- Learning by Doing;
- Case Study;
- Simulation study;
- Laboratory Work;
- Discussions/Debates
- Online teaching;
- etc.

The activities used for teaching and learning complement each other. Learning outcomes can be achieved in a variety of ways, such as: independently processing/explaining/interpreting books/manuals, practical examples, preparing a professional report, preparing answers to questions, performing written assignments, analyzing cases, participating in discussions and debates, independently preparing a research paper based on the supervisor's instructions, independent preparation of paper/project/thesis and learning by doing practical work. The student should actively participate in the learning process in order to ensure the practical application of theoretical knowledge in real or near-real situations.
The methods of assessment of learning outcomes are also diverse and include participation in debates/discussions/professional discussions, public presentations in

native or foreign language, individual assessment based on projects, research papers and exams, performance of oral and written tasks, assessment of team work, mutual assessment of students, report preparation and presentation and more. During the implementation of the master's educational programme in management information systems, the student must be evaluated in accordance with the evaluation system approved by Order N3 of the Minister of Education and Science of Georgia on "The rule of calculation of higher education programmes with credits " dated January 5, 2007.

Additional Information

Based on the levels of Bloom's taxonomy, the council developed a table for determining the competencies of the master's level in the relevant field of management information systems.
The mentioned table of competences is a list of minimum competences, which will help the implementers of educational programmes in the process of designing the programmes.
The levels of expected learning outcomes are defined in accordance with Bloom's taxonomy, in terms of remembering, understanding, applying, analyzing, evaluating, creating, and are shown in Table 1.

The directions of the management information systems:

1. Organization management and organizational environment.
2. Analysis of management information systems in organizations.
3. Management of databases in organizations.
4. Information security and protection.
5. Information technologies in project management.
6. Modern digital technologies in organizations.

Table 1: Expected competencies according to the levels of Bloom's taxonomy in the relevant field of management information systems at the master's level:

N	Basic areas of management information systems to master the mandatory minimum knowledge-skills for qualification		Remembering	Understanding	learning	Analyzing	Evaluati	Creatin
			1	2	3	4	5	6
1.	**Organization management and organizational environment**	Strategic management of an organization. Policy, management of technological innovation. Social, economic, cultural, legal and						

		technological environment of the organization.						
2.	**Analysis of management information systems in organizations**	Evaluation of management information systems, management and formation of development strategies, promotion of innovation introduction, modeling and optimization of business processes, business analysis, management of organizational changes in a technological environment.						
3	**Management of databases in organizations**	Effective management of databases in organizations (data collection, cleaning, interpretation, data analysis tools, use of statistical methods, cloud databases, etc.), database management systems.						
4.	**Information security and protection**	Protection of data in organizations, network and application security, user authorization and authentication management, continuity planning in case of incidents, risk management, raising employee awareness of security issues, etc.						
5	**Information technologies in project management**	Management of projects with information technologies in organizations (planning, resource distribution, implementation, monitoring, risk analysis, quality management and completion of the project). Software used to manage projects						
6	**Organizations' modern digital Technologies**	Impact assessment of modern digital technologies (artificial intelligence (AI), machine learning (ML), blockchain technology, Internet of Things (IoT), etc.) in organizations and their strategic management advantage.						

VI. Additional Information

6.1 The Subject Benchmark Statement of Management Information Systems shall enter into force upon approval.

6.2 The qualifications determined by the subject benchmark statement can be granted only after adding "Management Information Systems" to the detailed field of study of "Management and Administration" (in the second column) provided by the "Classifier of Fields of Study" approved by the Order No. 69/N of the Minister of Education, Science, Culture and Sports of Georgia dated April 10, 2019.

6.3 The higher educational institution must develop master's educational programmes aligned with the Subject Benchmark Statement of Management Information Systems under the mentioned qualification.

6.3 The institution is obliged, at the time of submission of the accreditation application of a new educational programme/programmes to the National Center for Educational Quality Enhancement, to have the programme/programmes under the requirements of the subject benchmark statement;

VII. Members of the Subject Benchmark Development Group

7.1. Members of the document development group

Members of the Subject Benchmark Council of Higher Education of Management and Administration

№	Name, surname	Organization/institution	Position
1	Natia Zedginidze-Jishkariani	LEPL Kutaisi International University	Head of School of Management, Head of management programme, professor, chairman of the council;
2	Tsiuri Duruli	LEPL Gori State University	Head of bachelor's and master's programmes in business organization and management, professor - secretary of the council;

3	Gocha Tutberidze	LTD Kutaisi University	Rector, Head of Doctoral Programme in Economics, co-head of the Business Administration bachelor's programme and co-head of the master's finance programme, Professor - a member of the council
4	Ekaterine Natsvlishvili	LTD "European University"	Head of bachelor's programme and master's programmes in management Associate Professor - a member of the council
5	Marine Kobalava	LTD Tbilisi Free Academy	Vice Rector, Invited personnel Doctor of Economics, - a member of the council
6	Giorgi Turkia	N(N)LE Georgian Institute of Public Administration	Head of the business administration department, head of business administration bachelor's and master's programmes, Professor - a member of the council
7	Larisa Takalandze	LEPL Sokhumi State University	Professor of the Faculty of Business and Social Sciences in the direction of management, co-head of bachelor's and master's programmes in business administration / head of the management module - a member of the council
8	Eka Chokheli	LEPL - Ivane Javakhishvili Tbilisi State University	Associate Professor in Management and Administration - a member of the council
9	Akaki Kheladze	LEPL- Kutaisi international University	Professor of the School of Management - a member of the council
10	Anzor Abralava	LEPL -Georgian Technical University.	Professor - a member of the council

11	Zaza Sopromadze	LEPL- Georgian Technical University	Associate Professor - a member of the council
12	Badri Ramishvili	LEPL - Ivane Javakhishvili Tbilisi State University	Associate Professor in Management and Administration - a member of the council
13	Ia Jimshitashvili	LEPL Iakob Gogebashvili Telavi State University	Professor of the Faculty of Social Sciences, Business and Law - a member of the council
14	Lasha Narsia	LEPL Shota Meskhia Zugdidi State Teaching University	Associate Professor - a member of the council
15	Roman Mamuladze	LEPL Teaching University- Batumi State Maritime Academy	Professor - a member of the council
16	Zurab Garakanidze	LEPL - David Aghmashenebeli National Defence Academy of Georgia ,	Associate Professor - a member of the council
17	Eka Devidze	LTD International Black Sea University	Professor - a member of the council
18	Mikheil Tokmazishvili	Ltd. Alte University	Invited personnel - a member of the council
19	Giorgi Bedineishvili	LTD Free University of Tbilisi	Business School Dean - a member of the council
20	Nino Zarnadze	LTD Caucasus International University	Associate Professor - a member of the council

21	Teona Maisuradze	LTD Georgian National University SEU	Head of business administration programmes in Georgian and English, professor - a member of the council
22	Natia Surmanidze	Ltd Georgian University	Fellow Researcher - a member of the council
23	Nino Damenia	NNLE - Saint Andrew the First-Called Georgian University of the Patriarchate of Georgia	Professor - a member of the council
24	Vakhtang Charaia	Grigol Robakidze University LLC	Deputy Rector in Scientific and Research Direction, Associate Professor - a member of the council
25	Nino Murjikneli	The Ministry of Economy and Sustainable Development of Georgia	Head of the primary structural unit of the administrative department - a member of the council
26	Elena Zerekidze	Company "BDO GEORGIA"	Learning and Development L& Service Manager - a member of the council
27	Nana Shonia	LEPL Akaki Tsereteli State University	Faculty of Business and Social Sciences Professor - a member of the council

7.2. Members of the document development group/working group within the scope of external initiation[2]

Members of the development group/working group of the Subject Benchmark Statement of Management Information Systems within the scope of external initiation

N	Name, surname	Organization/institution	Position

[2] Filled in if available

1	Demur Sitchinava	LEPL - Ivane Javakhishvili Tbilisi State University	Professor
2	Rusudan Seturidze	LEPL - Ivane Javakhishvili Tbilisi State University	Associated Professor, Higher Education Accreditation Expert
3	Tea Munjishvili	LEPL -Ivane Javakhishvili Tbilisi State University	Associate Professor
4	Murtaz Maghradze	LEPL -Ivane Javakhishvili Tbilisi Tbilisi State University	Professor-Emeritus
5	Tina Melkoshvili	LEPL -Ivane Javakhishvili Tbilisi Tbilisi State University	Associate Professor
6	Mzia Tikishvili	LEPL -Ivane Javakhishvili Tbilisi Tbilisi State University	Assistant-professor
8	Eka Lekashvili	LEPL - Ivane Javakhishvili Tbilisi State University	Associate Professor, Higher Education Accreditation Expert
9	Davit Sikharulidze	LEPL - Ivane Javakhishvili Tbilisi State University	Associated Professor, Higher Education Accreditation Expert
10	Nino Paresashvili	LEPL -Ivane Javakhishvili Tbilisi Tbilisi State University	Associate Professor