METROLOGY, STANDARDIZATION AND CERTIFICATION IN INFORMATION TECHNOLOGY

COURSE SYLLABUS ABSTRACT
of higher education institution

Speciality 1-28 01 02 – Digital Marketing

	STUDY MODE	
	full-time	part-time
Year	2	3
Semester	4	5
Lectures, hours	34	6
Practical classes (seminars), hours	16	4
Pass/fail, semester	4	5
Contact hours	50	10
Independent study, hours	58	98
Total course duration in hours / credit units	108/3	108/3

1. Course outline: The subject and tasks of metrology. Basic concepts of theoretical metrology. The theory of reproduction of units of physical quantities and transmission of their sizes (the theory of unity of measurements). Measurement errors. Processing of measurement results. Measuring instruments. Metrological Service of the Republic of Belarus. Fundamental principles of standardization. Levels of standardization and standardization bodies. Technical normative legal acts in the field of technical regulation and standardization.

2. Course learning outcomes: upon completion of the course, students will be expected to

know:

– basic justifications, methods and means of measuring various quantities;
– State system of standardization and certification, main categories and types of sections established in the Republic of Belarus;
– theoretical foundations of measurements
– systems for ensuring the uniformity of measurements
– measurement tasks, selection of measurement methods, forms of measurement results

be able to:

– choose measurement methods
– carry out mathematical processing of measurement results
– identify and evaluate measurement errors

possess:

– effectively use the standards of all categories and types, correctly apply the main methods of standardization;
– technically and metrologically correct to choose the measurement method and measuring equipment for solving practical measurement problems;
– methodically correctly perform measurements, evaluate accuracy and document measurement results.

3. Competencies: be able to apply basic scientific and theoretical knowledge to solve theoretical and practical problems (SC-6).

4. Requirements and forms of midcourse evaluation and summative assessment

A modular rating system is used. Intermediate certification: evaluation of work in practical classes. Current certification: pass/fail.