Syllabus of Academic Discipline
"Modern quality management tools"

№	Field name	Detailed content, comments
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1.	Name of the faculty	Faculty of Cybersecurity
2.	The level of higher education	Master's educational and scientific
3.	Code and title of specialty	G6 – Information and Measuring Technologies
4.	The type and title of the educational program	Educational program – Quality assurance
5.	Code and title of the discipline	SIUYa (Modern quality management tools)
6.	Number of ECTS credits	3
7.	The structure of the course (distribution by type and hours of training)	36 h. – 18 L., 18 h. – 9 P., 6 h. – 3 C., h. – 54 independence, type of control: credit
8.	Schedule (terms) of study of the subject	I year, I semester
9.	Prerequisites for learning the discipline	Previously, the disciplines "Higher mathematics", "Qualimetry", "Standardized approach to quality management" should be studied.
10.	Abstract (content) of the discipline	Selective discipline of basic (professional) studying in the specialty, contains content modules: 1. Classification of modern quality management tools. 2. Comprehensive quality management model "Six Sigma". Tools for implementation of the "Six Sigma" model. 3. Modern quality management tools in Lean Production models. 4. Modern tools for managing the quality of business processes.
11.	Competencies, knowledge, skills, understanding that a higher education applicant has in the learning process	Integral competence: Ability to solve complex tasks and problems in the field of metrological support of measurements, which involves research and/or implementation of innovations and is characterized by uncertainty of conditions and requirements. **General competencies:** GC-1 Knowledge and understanding of the subject area and understanding of professional activities GC-3 Skills in the use of information and communication technologies GC-4 Ability to conduct research at the appropriate level GC-5 Ability to search, process and analyze information from various sources GC-6 Ability to identify, pose and solve problems GC-7 Ability to make informed decisions GC-8 Ability to work in an international context

		GC-9 Ability to develop and manage projects **Professional competencies:** PC-2 Practical skills in solving complex problems and problems of metrology, information and measuring equipment, standardization in assessing product quality. PC-5 Ability to solve complex professional tasks and problems based on understanding of technical aspects of ensuring product quality control. PC-10 Ability to take into account commercial and economic contexts in metrological activities. PC-16 Ability to demonstrate proficiency in the organization of standardization, conformity assessment and quality management work
12.	Learning outcomes of a Higher Education applicant	**Program learning outcomes:** PLO-3 Understand interdisciplinary connections and specialty contexts PLO-8 Possess modern methods and techniques of design and research, as well as analysis of the results obtained PLO-16 Carry out quality management based on modern standards and methods
13.	Assessment system in accordance with each task for taking tests/exams	6 tests on practical classes. Credit score (C) is calculated by the formula: $C=(8-15)Р№1+(13-20)Р№2+(8-15)Р№3+(7-15)Р№4+(7-15)Р№5+(17-20)Р№6=(60-100)$ credit score.
14.	The quality of the educational process	Adherence to the principles of academic integrity (http://lib.nure.ua/plagiat). Update the work program of the discipline – 2025 year.
15.	Methodological support	Complex of educational and methodological support in the discipline "Modern quality management tools" for students of all forms of study of specialty 175 "Information and measuring technologies" of the educational and professional program "Quality Assurance" [Electronic edition] / Compiled by Moschenko I.O. Kharkiv: NURE, 2023. 58 p.
16.	The developer of the Syllabus	I.Moshchenko, Department of Information and Measurement Technology, associate professor, PhD E-mail: inna.moshchenko@nure.ua