

Syllabus of Academic Discipline
“Statistical quality management tools”

№	Field name	Detailed content, comments
1.	Name of the faculty	FACULTY OF INFOCOMMUNICATIONS
2.	The level of higher education	Bachelor's educational and scientific
3.	Code and title of specialty	152 – Metrology and Information-Measuring Technology
4.	The type and title of the educational program	Educational program – Quality of products, processes and software
5.	Code and title of the discipline	SMUYa Statistical quality management tools
6.	Number of ECTS credits	3
7.	The structure of the course (distribution by type and hours of training)	12 h. – 6 L., 6 h. – 10 P., 6 h. – 3 C., h. – 60 independence, type of control: credit
8.	Schedule (terms) of study of the subject	III year, V semester
9.	Prerequisites for learning the discipline	Previously, the disciplines «Higher mathematics», Standardized approach to building modern quality management systems, should be studied.
10.	Abstract (content) of the discipline	Selective discipline of basic (professional) studying in the specialty, contains content modules: 1. Classification of statistical methods of quality management. 2. Classical statistical methods of quality management. 3. New statistical quality control tools. 4. Statistical methods of expert assessment of quality indicators.
11.	Competencies, knowledge, skills, understanding that a higher education acquirer has in the learning process	Knowledge and understanding of the goals and objectives of using statistical tools of quality control, methods of their use, advantages and disadvantages. Ability to apply statistical tools of quality control in practice, use computer tools for processing and visualization of statistical data. Mastering the technique of using computer technology to process the results of measuring quality indicators.
12.	Learning outcomes of a Higher Education applicant	Ability to demonstrate knowledge and understanding of the classification of modern statistical methods of quality management; purposes and conditions of application of each statistical method; algorithms for the implementation of statistical tools; advantages and disadvantages of each quality control tool.
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:

		$C=(10-16)PN_{\text{1}}+(10-20)PN_{\text{2}}+(10-16)PN_{\text{3}}+(10-16)PN_{\text{4}}+(10-16)PN_{\text{5}}+(10-16)PN_{\text{6}}=(60-100)$ 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 – 2023 year.
15.	Methodological support	<p>1. Complex of educational and methodical support of the educational discipline "Models of total quality management" for the bachelor of a specialty 152 "Metrology and information-measuring technology", educational program "Technical expertise" [Electronic resource] / KhNURE; Compiler: I.Moshchenko. - Kharkiv, 2018. http://catalogue.nure.ua/knmz.</p> <p>2. Metodichni vказivky do praktychnykh zaniat z dystsyplin «Modeli zahalnoho keruvannia yakistiu» dlia studentiv usikh form navchannia spetsialnosti 152 «Metrolohiia ta informatsiino-vymiriuvalna tekhnika» osvitno-profesiinoi prohramy «Tekhnichna ekspertyza» / Uporiad. I.O. Moshchenko. – Kharkiv: KhNURE, 2021. – 32 s.</p> <p>3. Kompleks navchalno-metodychnoho zabezpechennia navchalnoi dystsypliny "Statystychni metody upravlinnia yakistiu" pidhotovky bakalavra spetsialnosti 152 «Metrolohiia ta informatsiino-vymiriuvalna tekhnika», osvitnia prohrama «Tekhnichna ekspertyza» [Elektronnyi resurs] / KhNURE ; rozrob. I.O.Moshchenko. – Kharkiv, 2023.</p>
16.	The developer of the Syllabus	I.Moshchenko, Department of Information and Measurement Technology, PhD E-mail: inna.moshchenko@nure.ua