

# COURSE SYLLABUS

## STATISTICS

### **Degree of higher education first (bachelor)**

**Specialty** 051 Economics, 071 Accounting and Taxation, 072 Finance, Banking and Insurance, 073 Management, 075 Marketing, 076 Entrepreneurship, Trade and Exchange Activities, 241 Hotel and Restaurant Business, 242 Tourism, 281 Public Administration

**Educational Program** Economics, International Economics, Accounting and Taxation, Finance, Banking and Insurance Travel Business, Management, Marketing, Business and Commercial Activities, Hotel and Restaurant Business, Business and Legal Activities, Tourism, Public Administration and Administration

**Course status** – compulsory.

**Instructor of the Department of Finance and Financial and Economic Security: Tarasenko I., Doctor of Science, Professor**

### **1. Course description**

**Semesters:** 3.

**Scope:** total number of hours – 90, including: lectures – 12 hours, practical – 24 hours, independent work – 54 hours; number of ECTS credits – 3.

**Course objectives** – acquisition of theoretical knowledge, practical skills, abilities and abilities, as well as the opportunity to demonstrate them in independent and collective practical work in the field of statistics, which may include tasks related to statistical observation, organization of statistical research, data analysis, development of recommendations for management of phenomena and processes of socio-economic life.

#### **Learning outcomes of the course:**

*know:* statistical observation; the concept of statistical research and its stages; methods of analysis of patterns and trends in socio-economic phenomena and processes; requirements for statistical information, features of its movement and main users; theoretical foundations of statistical observation as a way of forming an information base for research and management decisions; applied statistical computer programs (MS Excel, SPSS, CTATISTICA); methods and procedures for conducting statistical research, statistical tools and features of its application; program-methodological principles of organization of statistical research; statistical methods of analysis of patterns and trends in socio-economic phenomena and processes;

*be able to:* understand the essence of phenomena and processes of socio-economic life, consciously use scientific knowledge in cognitive and professional activities, namely: to formulate the purpose, the main tasks of statistical observation, to determine its object and unit; determine the content of the observation program in accordance with its purpose and characteristics of the object; to control statistical information and perform its compilation; apply methods of analysis of patterns and trends in socio-economic phenomena and processes in professional activities; to use information technologies and technologies of artificial intelligence in the process of statistical research; perform the necessary analytical calculations using computer equipment and static applications in accordance with the purpose of the statistical study; independently develop literature on statistics; analyze specific socio-economic phenomena and processes in the categories of statistics; apply the acquired knowledge to analyze the phenomena and processes of socio-economic life; to carry out modeling of the investigated phenomena and processes with use of methods KRA, trend and others; perform calculations of statistical indicators, using special methods and tools, analyze the information obtained and develop recommendations (management decisions) aimed at improving the values of statistical indicators and improving processes in the socio-economic sphere;

*be able to demonstrate:* knowledge of the tasks set before the bodies of the State Statistics of Ukraine and the package of Laws of Ukraine in the field of statistics; knowledge and skills of computer skills during the processing of primary statistical materials, their grouping and compilation; correlation-regression analysis, sampling and index methods, analysis of time series, graphical representation of data; skills of using applied statistical computer programs and products to solve problems in the process of statistical research to meet the information needs of different

groups of information users; application in practice of economic and statistical methods in practice; the logic of structuring socio-economic phenomena and processes, taking into account current issues of socio-economic stratification; skills of generalization and development of practical recommendations for management decisions; independence in solving specific research problems when working with analytical statistical information; skills and abilities to perform qualitative and quantitative analysis of statistical aggregates, statistical data processing; to assess the patterns and trends in the development of the studied phenomena and processes; use elements of variance, correlation-regression analysis and dynamics analysis; use the results of the study of phenomena and processes in the process of solving economic problems;

*have the skills of:* conducting statistical research, analysis of statistical information and its interpretation in order to develop recommendations for the management of phenomena and processes of socio-economic life; practical use of the acquired deep knowledge in the process of conducting statistical research, analysis of statistical information using modern information technologies and its visualization by graphic objects in order to develop recommendations for the management of phenomena and processes of socio-economic life; independently create databases to solve specific problems at different stages of statistical research, processing of primary statistical material, analysis of statistical data;

*independently solve:* to analyze statistical and economic information using quantitative and qualitative methods in order to make informed management decisions in professional activities; tasks in computer networks in the process of conducting and processing statistical observation data using methods and tools of statistical science and modern information technology; tasks of processing, analysis and generalization of statistical information using computer technology and applied statistical programs; work with instructional materials, scientific and educational literature on the discipline, analyze, organize and control indicators in the process of statistical observation and other types of special research using statistical tools, interpretation of data and justification of management decisions, based on the results of calculations and analysis, draw conclusions and generalizations; to formulate conclusions and recommendations on the management of phenomena and processes of socio-economic life based on the results of systematization and analytical generalization of statistical information.

**Required educational components (prerequisites, co-requisites, post-requisites):** macro- and microeconomics, higher and applied mathematics, finance, accounting and taxation, foreign language of professional orientation, management, marketing, economic-mathematical methods and models; reporting and analytical methods of information processing; analysis and control.

**Course content:** Topic 1. Methodological principles of statistics. Topic 2. Statistical observation. Topic 3. Compilation and grouping of statistics and their role in information analysis. Topic 4. Generalized statistical indicators. Topic 5. Analysis of concentration, differentiation and similarity of distributions. Topic 6. Presentation of statistical data: tables, graphs, maps. Topic 7. Selective method. Topic 8. Statistical methods for measuring relationships. Topic 9. Analysis of the intensity of dynamics, development trends and fluctuations. Topic 10. Index method..

**Forms of final control:** exam (semester 3).

**Tools for diagnosing learning success:** individual tasks, namely: presentations, calculation works, exercises, questions for current and final control.

**Language of instruction:** Ukrainian, English.

## 2. Assessment

### Distribution of points received by applicants for higher education

#### Exam

Ongoing assessment and independent work										MK (test)	Exam	Total
T1	T2	T3	T4	T5	T6	T7	T8	T9	T10			
6	6	6	6	6	6	6	6	6	6	30	10	100

### Distribution of points in the course

Activities evaluated in points	T1	T2	T3	T4	T5	T6	T7	T8	T9	T 10	Total
Speech at a practical lesson	2	2	2	2	2	2	2	2	2	2	20
Execution and protection of settlement work			4	4		4		4	4		20
Presentations / essays / individual tasks	4	4			4		4			4	20
Modular / current control	30										30
Examination	10										10
<b>Total from the discipline</b>											<b>100</b>

### Exam evaluation criteria

Distribution of points	Evaluation criteria
8-10	The student possesses educational material, explains it independently and argumentatively during oral presentations and written answers, deeply and comprehensively reveals the content of theoretical questions and practical tasks, using the required and additional literature. Correctly solved all test tasks.
6-7	The student sufficiently masters the educational material, reasonably explains it during oral presentations and written answers, mainly reveals the content of theoretical questions and practical tasks, using the required literature. However, some issues lack sufficient depth and argumentation, and some minor inaccuracies and minor errors are made. Correctly solved most of the test tasks.
3-5	The student generally possesses educational material, explains its main content during oral presentations and written answers, but without a deep comprehensive analysis, justification and argumentation, without the use of the necessary literature, while allowing some significant inaccuracies and errors. Correctly solved half of the test tasks.
2-3	The student not fully possesses educational material. Fragmentary, superficial (without argumentation and justification) explains it during oral presentations and written answers, insufficiently discloses the content of theoretical questions and practical tasks, while allowing significant inaccuracies, correctly solved a minority of test tasks.

### Compliance with the scales for assessing the quality of learning material

Score on the national scale	Points	Assessment on the ECTS scale	Definition
<b>excellent / passed</b>	90-100	<b>A</b>	<b>Excellent</b> (outstanding performance without errors)
<b>good / passed</b>	82-89	<b>B</b>	<b>Very good</b> (above the average standard but with minor errors)
	74-81	<b>C</b>	<b>Good</b> (generally sound work with some errors)
<b>satisfactory / passed</b>	64-73	<b>D</b>	<b>Satisfactory</b> (fair but with significant shortcomings)
	60-63	<b>E</b>	<b>Fair</b> (performance meets the minimum criteria)
<b>unsatisfactory / failed</b>	35-59	<b>FX</b>	<b>Fail</b> (some more work required before the credit can be awarded)
	0-34	<b>F</b>	<b>Fail</b> (considerable further work is required)

### **3. Course policy:**

3.1 Mandatory observance of academic integrity by students, namely:

- independent performance of all types of work, tasks, forms of control provided by the work program of this discipline;
- links to sources of information in the case of the use of ideas, developments, statements, information;
- compliance with the legislation on copyright and related rights;
- providing reliable information about the results of their own educational (scientific, creative) activities, used research methods and sources of information.

3.2 To obtain a positive grade in the discipline it is necessary to obtain a minimum number of points for each work (topic) and modular control.

3.3 In case of untimely presenting works the student is sent for re-taking.

3.4 Postponement of delivery / re-taking:

- for good reasons (sick leave, academic mobility, etc.) the work is submitted during the semester or at the end of the semester and is assessed according to the level of work performance;
- without good reasons, the student is sent for retaking with a minimum score.

3.5 When plagiarism is detected, it is returned for revision, and then re-assessed for minimum scores.

3.6 Missed classes are worked out according to the agreed schedule.

3.7 Assessment appeal is possible with a written request of the student on the day of the announcement of the final assessment results. Assessment appeal takes place at a meeting of the commission, headed by the head of the department.