STATISTICAL METHODS OF DATA ANALYSIS

# COURSE SYLLABUS ABSTRACT

**Speciality** 6-05-0611-04 Electronic economy
**Concentration** Electronic Marketing

| | STUDY MODE | |
|---|---|---|
| | full-time | part-time |
| Year | 3 | 3 |
| Semester | 5 | 6 |
| Lectures, hours | 16 | 4 |
| Laboratory classes, hours | 34 | 8 |
| In-class test (semester, hours) | – | 6 (2 hours) |
| Exam, semester | 5 | 6 |
| Contact hours | 50 | 14 |
| Independent study, hours | 58 | 94 |
| Total course duration in hours / credit units | 108 / 3 | |

**1. Course outline**
General characteristics of statistical data analysis methods. Preliminary statistical analysis of the data. Methods of statistical estimation and hypothesis testing. Correlation analysis. Regression analysis. Time series. Methods of statistical classification of multidimensional data.

**2. Course learning outcomes**
Upon completion of the course, students will be expected to

- know: methods of preliminary statistical data analysis; methods of statistical hypothesis testing; methods of correlation analysis; methods of regression data analysis; methods of time series analysis; multidimensional statistical methods;
- be able to: to carry out preliminary statistical analysis of data in order to establish a data model, identify data structure and anomalous observations; to carry out statistical analysis of multidimensional data in order to establish statistical dependencies using methods of correlation, regression and variance analysis; to carry out statistical analysis of the uniformity of multidimensional data based on graphical analysis and statistical criteria, as well as classification of heterogeneous data using multidimensional statistical scientific methods;
- to possess a skill: to solve basic problems of statistical analysis; prepare data and solve typical problems of statistical data analysis; use modern applied software packages to solve problems of statistical data analysis in economic and other applications; prepare reports with the results of statistical data analysis, including meaningful (economic) interpretation of the results of analysis, comments, conclusions and recommendations.

**3. Competencies**
Apply statistical methods of analyzing large amounts of economic data to develop optimal solutions in professional activities.

**4. Requirements and forms of midcourse evaluation and summative assessment**
The module-based rating system is used. Mid-course evaluation: lab defense. Summative assessment: exam.