

# MULTIDIMENSIONAL STATISTICAL ANALYSIS IN FINANCE

## COURSE SYLLABUS ABSTRACT

Speciality **6-05-0411-02 «Finance and credit»**

Profiling **«Banking», «Taxes and taxation»**

	STUDY MODE	
	full-time	part-time
Year	3	3
Semester	6	6
Lectures, hours	34	8
Laboratory classes, hours	34	8
In-class test, semester (hours)	–	6 (2 hours)
Pass/fail, semester	6	6
Contact hours	68	18
Independent study, hours	40	90
Total course duration in hours / credit units	108 / 3	

### 1. Course outline

Multivariate general and sample populations. Correlation and regression analysis. Analysis of variance. Pattern recognition and object classification without training. Pattern recognition and object classification with training. Reducing the dimensionality of the studied multivariate features: the principal component method.

### 2. Course learning outcomes

Upon completion of the course, students will be expected

#### to know:

- basic concepts of multidimensional statistical analysis;
- the main types of problems of multidimensional statistical analysis in finance and methods of their solution;

#### be able to:

- develop models to solve the problems of multivariate statistical analysis in finance;
- test the quality of built models;

#### to possess a skill:

- a methodology for collecting statistical information for further economic analysis;
- to use standard application software packages for information processing.

### 3. Competencies

Operate with the basic concepts and methods of multidimensional statistical analysis, apply multidimensional statistical methods to identify implicit (latent) patterns in financial processes.

### 4. Requirements and forms of midcourse evaluation and summative assessment

Midcourse evaluation: protection of laboratory works. Summative assessment: pass/fail.