" FACTOR AND COMPONENT ANALYSIS ".

(name of the discipline)

OUTLINE

TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

specialty 7-06-0612-03 system information management

	Form of higher education	
	Full-time	**Correspondence**
Course	**2**	**2**
Semester	**3**	**4**
Lectures, hours	**16**	**4**
Laboratory hours	**16**	**4**
Credit., Semester	**3**	**4**
Classroom hours in the educational discipline	**32**	**32**
Independent work, semester hours	**76**	**76**
Total hours in the discipline / credit units	**108/3**	

1.Brief content of the training discipline

Familiarization with the main directions of development and mastering of modern multivariate statistical methods, obtaining skills of their practical application to analyze socio-economic processes and phenomena, mastering and practical application of knowledge and skills in the use of methods and principles of factor and component analysis to create applied developments, management, economic and other tasks.

2 Learning objectives

As a result of studying the academic discipline the student should

know:

basic principles, methods and results of modern multivariate statistical methods; methods of description of multivariate sample data, basic properties of multivariate sample characteristics; methods of dimensionality reduction of multivariate features: method of principal components, factor analysis; basic principles and methods of classification and discrimination of multivariate objects.

be able to:

perform primary processing of multivariate statistical information, find the main sampling characteristics of multivariate objects; identify principal components and statistically significantly estimate their number:perform factor analysis using the principal component method and the maximum likelihood method, assess the significance of the constructed factor model.perform classification of factors using various rotation procedures;perform classification of objects using agglomerative, divisional and iterative methods, estimate the number of factors; perform factor analysis using the method of principal components and the maximum likelihood method, assess the significance of the constructed factor model.

Have skill in:

basic analytical techniques of multivariate and statistical analysis;packages of applied programs used for multivariate statistical analysis (STATISTICA, EXCEL);methods of statistical evaluation of significance of constructed models.

3. Formative competences

SK-10 Apply methods and models of factor and component analysis for statistical processing of information.

4. requirements and forms of current and intermediate attestation.

HEA, TA, credit.