

ANNOTATION

INTERNATIONAL EUROPEAN UNIVERSITY



EUROPEAN SCHOOL OF BUSINESS

**Intellectual data analysis
EP « Computer Science and Technology»**

2024



ANNOTATION



1 Course and educational program name

Intellectual data analysis (elective discipline)
EP « Computer Science and Technology »

2 Course description

Data analysis is a study related to the calculation of a multidimensional data system with a set of parameters. In the process of data analysis, a set of actions is performed in order to form certain ideas about the nature of the phenomenon described by these data. As a rule, various mathematical methods and models are used for data analysis. Data mining approaches involve searching for functional and logical patterns in the accumulated data, building models and rules that explain the patterns found and/or predict the development of processes with a certain probability based on training the obtained models and algorithms.

3 Study prerequisites

The academic discipline is related to the disciplines "Higher and Applied Mathematics", " Computer-Based Discrete Mathematics", " Data Algorithms and Structures", "Probability Theory and Mathematical Statistics", "Object-Oriented Programming".

3 Department

Department of Information Technology



4 Course objectives

The purpose of teaching the academic discipline "Intellectual Data Analysis" is to provide students with theoretical training and knowledge of basic methodological principles and familiarization with tools such as Data Mining or Big Data as technologies designed to search for non-obvious, objective and practically useful patterns in large volumes of data, and to provide theoretical and engineering training for specialists in the field of design and development of intelligent information systems..

5 The role of academic discipline in achieving Program learning outcomes (PLO)

PLO1. To analyze, intentionally search for and select information and reference resources and knowledge required to solve professional problems, taking into account current scientific and technological achievements.

PLO6. Ability to select and use the appropriate methodology for developing information systems and technologies.

PLO13. To know and apply methods for developing algorithms, data structures, and knowledge.

PLO14. To understand the principles of modeling organizational and technical systems and operations; to use methods of operations research, and to solve single- and multi-criteria optimization problems in linear, integer, nonlinear, and stochastic programming

PLO16. To apply methods and algorithms of computational intelligence and intellectual data analysis in tasks of classification, forecasting, cluster analysis, and finding association rules using software tools for multidimensional data analysis based on Data Mining, Text Mining, and Web Mining technologies.