SYLLABUS

1. Information regarding the program

1.1 Higher education institution	**UNIVERSITY OF ORADEA**
1.2 Faculty	**FACULTY OF ECONOMICS**
1.3 Department	**DEPARTMENT OF ECONOMY AND BUSINESS**
1.4 Field of study	**BUSINESS ADMINISTRATION**
1.5 Cycle of study	**CYCLE I - BACHELOR**
1.6 Program of study/Degree	**BUSINESS ADMINISTRATION/ BACHELOR'S DEGREE**

2. Information regarding the discipline

2.1 Name of discipline			Digital statistics and artificial intelligence **(FSTE-1190)**				
2.2 Course titleholder			Prof. Univ. dr. Ioana Teodora MEŞTER				
2.3 Seminar titleholder			Prof. Univ. dr. Ioana Teodora MEŞTER				
2.4 Year of study	I	2.5 Semester	II	2.6 Type of assessment	Cv	2.7 Type of discipline	I

(I) Compulsory; (O) Elective; (F) Facultative

3. Estimated total time (hours/semester of activities)

3.1 Number of hours/week	3	out of which: 3.2 course	0	3.3 seminar/practical (laboratory)	2/1
3.4 Total of hours in the Curriculum	42	out of which: 3.5 course	0	3.6 seminar/practical (laboratory)	28/14
Distribution of hours:					**83hours**
Studying the workbook, course book, bibliography and notes					35hours
Supplementary documentation in the library, on electronic specialty sites and in the field					35 hours
Preparing seminars/laboratories, themes, projects, portfolios and essays					11hours
Tutorship					0 hour
Assessment activities					2 hours
Other activities.....					0 hours

3.7 Total hours of individual study	**83**
3.9 Total hours/semester	**125**
3.10 Number of credits	5

4. Pre-requisites (if applicable)

4.1 Curriculum	-
4.2 Skills	-

5. Conditions(if applicable)

5.1. concerning the course activities	-
5.2. concerning the seminar/laboratory activities	PowerPoint

6. 1. Specific skills acquired	
Professional skills	C1. Collection, processing and analysis of the information regarding the interaction between business environment firm / organization C3. Administration of the activity of a subdivision of the structure of the firm/organization C4. Assistance in human resources management
Transversal Skills	

6.2. Expected Learning Outcomes

Knowledge	The Student/Graduate identifies the advanced functionalities of office applications and their use in the economic field (complex spreadsheet calculations using functions, data validation, querying, summarizing, and graphical representation). The Student/Graduate identifies the fundamental principles of information security, including confidentiality, integrity, and availability of economic data. The Student/Graduate identifies and analyses concepts and technologies for business process automation and database management specific to the economic domain. The Student/Graduate describes the basic concepts of emerging technologies relevant to the knowledge-based information society (IoT, AI, Cloud/Fog/Edge Computing, Blockchain, etc.).
Skils	The Student/Graduate uses office applications in the economic field. The Student/Graduate recognizes and assesses security risks associated with information management in the economic domain. The Student/Graduate uses automation tools to automate repetitive tasks in economic activities. The Student/Graduate identifies business processes that can be automated. The Student/Graduate utilizes open-source tools to leverage the main functionalities offered by emerging technologies.
Responsibility and Autonomy	The Student/Graduate ensures the accuracy and clarity of information in documents managed with office applications. The Student/Graduate operates while adhering to preventive measures to protect data. The Student/Graduate verifies and monitors the correctness of automated processes, ensuring data accuracy and compliance with applicable regulations. The Student/Graduate demonstrates the ability to leverage technological and economic opportunities generated by the information environment in the context of smart development.

6.3. Objectives of discipline (resulting from the grid of specific skills acquired)

6.3.1 General objective of discipline	▪ Understanding the measuring, analysis and interpretation methods of economic and financial data, the formation and developing of the ability to analyse and synthesize statistical information
6.3.2 Specific objectives	▪ The explaining of the correlation between economic variables and statistical notions ▪ The appropriate use of calcullus methods ▪ The use of statistical indicators for the study of economic andfinancial phenomena ▪ The developping of the ability to explain statistical information ▪ The use of probability in the investigation of economic phenomena ▪ Formation of an economic researcher ▪ The formation and developement to solve interdisciplinary problems ▪ The formation of research abilities

7. Contents

7.2 Seminar (S)	Teaching methods	Observations
7.2.1. Introductory seminnaire. Introduction to Digital Statistics and Generative AI.	Lecture, conversation, examples, explanation, demonstrations, exercises	2 hours
7.2.2. Constructing unidimensional and bidimensional distributions.	Lecture, conversation, examples, explanation, demonstrations, exercises	2 hours
7.2.3. Graphical representation of statistical data: histograms and pie charts.	Lecture, conversation, examples, explanation, demonstrations, exercises	2 hours
7.2.4. Graphical representation of statistical data: scatterplots and time-series graphs.	Lecture, conversation, examples, explanation, demonstrations, exercises	2 hours
7.2.5. Measures of central tendency: arithmetic mean, mode and median.	Lecture, conversation, examples, explanation, demonstrations, exercises	2 hours
7.2.6. Analysing the skewness and kurtosis of a statistical distribution.	Lecture, conversation, examples, explanation, demonstrations, exercises	2 hours
7.2.7. Measures of variability: variance, standard deviation and coefficient of variation.	Lecture, conversation, examples, explanation, demonstrations, exercises	2 hours
7.2.8. Analysing the correlation between two variables using non paramethric and paramethric methods. Evaluating the stength of the correlation. Estimating a simple linear regression model.	Lecture, conversation, examples, explanation, demonstrations, exercises	2 hours
7.2.9. Designing a questionnaire: general principles and guidelines.	Lecture, conversation, examples, explanation, demonstrations, exercises	2 hours
7.2.10. Collecting, processing and interpreting survey data.	Lecture, conversation, examples, explanation, demonstrations, exercises	2 hours

7.2.11. Graphical presentation of survey results. Constructing and interpreting statistical tables.	Lecture, conversation, examples, explanation, demonstrations, exercises	2 hours
7.2.12. Using the chi-square test for testing research hypotheses.	Lecture, conversation, examples, explanation, demonstrations, exercises	2 hours
7.2.13. Using generative AI in statistical analysis.	Lecture, conversation, examples, explanation, demonstrations, exercises	2 hours
7.2.14. Presentation of a statistical research project.	Exercises	2 hours
Bibliography 1. Meșter, Ioana Teodora, *EconomicStatistics*, EdituraUniversităţii din Oradea, 2013. 2. Salvatore, D., Reagle, R.,*Schaum's Outline of Statistics and Econometrics*, McGraw Hill, 2011		
7.3 Laboratory (L)	Teaching methods	Observations
7.3.1. Introduction. Select two macroeconomic indicators and collect the statistical data from INSSE / BNR / Eurostat	Lecture, explanation, exercises	2 hours
7.3.2. Constructing unidimensional and bidimensional distributions. Graphs - histogram, chartpie	Lecture, explanation, exercises	2 hours
7.3.3. Graphs – scatterplot, time series graph starting from the two selected macroeconomic indicators.	Lecture, explanation, exercises	2 hours
7.3.4. The average value, the modal value, the median	Lecture, explanation, exercises	2 hours
7.3.5. The skewness of a variable. The kurtosis of a variable. The variance of variables. The homogeneity coefficient	Lecture, explanation, exercises	2 hours
7.3.6. Analysing the correlation between the two selected variables (non paramethric and paramethric methods). Estimating a simple linear regression model.	Lecture, explanation, exercises	2 hours
7.3.7. Chi-squared method. Testing some hypotheses based on given data.	Lecture, explanation, exercises	2 hours
Bibliography 1. Meșter, Ioana Teodora, *Economic Statistics*, EdituraUniversităţii din Oradea, 2013. 2. Salvatore, D., Reagle, R., *Schaum's Outline of Statistics and Econometrics*, McGraw Hill, 2011		

8. Corroboration of the contents of the discipline with the expectations of the epistemic community, professional associations and employers representing the field of study of the program

- The course content is consistent with what is being studied in other universities in our country and abroad.
- To better adapt the contents of the discipline to market demands there have been meetings held with the representatives of several companies in Oradea.

9. Use of Generative Artificial Intelligence Tools

The use of generative artificial intelligence (GenAI) tools is **not permitted** during assessment activities (written examination).

10. Assessment

Type of activity	10.1 Assessment criteria	10.2 Assessment methods	10.3 Percentage of the final grade
10.5 Seminar (S)	The assimilation of notions. Specific language coherence.	Presenting a research project	50%
10.6 Laboratory (L)	• Correct selection and application of statistical methods; • Accuracy of calculations and graphical representations; • Correct use of the computer-based statistical tools; • Appropriate interpretation of the results; • Ability to formulate relevant conclusions based on the results obtained.	Computer-based practical examination: Students are required to complete three practical tasks involving the calculation of statistical indicators and/or the construction of statistical graphs, followed by the interpretation of the results.	50%
10.9 Minimum performance standard			
▪ Learing the basic statistical notions ▪ The ability to uses tatistical notions to solve a simple problem ▪ The correct interpretation of the values obtained in a statistical problem ▪ Obtaining at leastthe 4,50 grade at the written paper during the exam session			

▪ Designing a study / business administration project ▪ Designing a work/project, assuming the responsibility of tasks specific to the role of multi-specialized team.

Date	Course/Seminar titleholder:	Project title holder:
23.09.2026	**Profesor, Ioana Teodora MEȘTER** imester@uoradea.ro	**Profesor, Ioana Teodora MEȘTER** imester@uoradea.ro

Director of Department,
Prof. Phd. Habil. Dorin Paul BÂC, PhD

Date of approval in the Department:

24.09.2026

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Dean,
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Date of approval in The Council of the Faculty of Economic Sciences:

28.09.2026

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