SYLLABUS

1. Information regarding the program

1.1 Higher education institution	**UNIVERSITY OF ORADEA**
1.2 Faculty	**FACULTY OF ECONOMIC SCIENCES**
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			**Financial and actuarial mathematics (FSTE-0780)**				
2.2 Course titleholder			Associate Prof. PhDIoana Teodora MEȘTER				
2.3 Seminar titleholder							
2.4 Year of study	I	2.5 Semester	I	2.6 Type of assessment	Cv	2.7 Type of discipline	I

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

3. Estimated totaltime(hours/semester of activities)

3.1 Number of hours/week	2	out of which: 3.2 course	1	3.3 seminar	1
3.4 Total of hours in the Curriculum	28	out of which: 3.5 course	14	3.6 seminar	14
Distribution of hours:					47hours
Studying the workbook, course book, bibliography and notes					15hours
Supplementary documentation in the library, on electronic specialty sites and in the field					15hours
Preparing seminars/laboratories, themes, projects, portfolios and essays					16hours
Tutorship					0hour
Assessment activities					1 hour
Other activities.....					0 hours

3.7 Total hours of individual study	**47**
3.9 Total hours/semester	**75**
3.10 Number of credits	3

4. Pre-requisites (if applicable)

4.1 Curriculum	-
4.2 Skills	-

5. Conditions(if applicable)

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

6. Specific skills acquired	
Professional skills	• C1.3Applyingtheadequateinstruments for theanalysis of theinfluencerelationexertedbytheexternal business environment on thefirm/organization • C3.3 Applyingthe specific instruments for theanalysis of thefunctioning of a subdivision of thefirm/organization • C4.3 Solvingproblems/specific solutions for thehumanresources: recruiting, selection, motivation, payment, workinghours, training • C6
Transversal Skills	

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

7.1 General objective of discipline	▪ Gettingthestudentsusedtothemainnotionsused in mathemathics, whichwillofferthestudentsthepossibilitytodevelopmathematicalmodels for the economic phoenomena, as well as touse modern methodsandtechniques of organizationand management. ▪ Developingtheabstractisationandinterpretationskills of theresults.
7.2 Specific objectives	▪ Knowing and understanding mathematical notions. ▪ Knowing and understanding mathematical notions applied in economics. ▪ Knowing and understading financial mathematics notions. ▪ Explaining the mathematical apparel used in economics ▪ Explaining the mathematical results. ▪ Explaining the formulas used in actuarial and financial calcullus ▪ Developping the generalization abilities in order to use mathematics For the analysis of economic phoenomena ▪ Getting used to mathematical calcullus ▪ Developping a positive attitude towards the importance of mathematics in economy ▪ Promoting a value-centered scientific environment

8. Contents

8.1 Course (C)	Teaching methods	Observations
8.1.1. Introductory course Introduction in the probability theory.	Lecture, conversation, examples, explanation, demonstrations, exercises	1 hour
8.1.2. Introduction in the probability theory	Lecture, conversation, examples, explanation, demonstrations, exercises	1 hour
8.1.3. Discrete random variables. Definition, specific values.	Lecture, conversation, examples, explanation, demonstrations, exercises	1 hour
8.1.4. Particular discrete random variables	Lecture, conversation, examples, explanation, demonstrations, exercises	1 hour
8.1.5. Continuous random variables. Definition, specific values.	Lecture, conversation, examples, explanation, demonstrations, exercises	1 hour
8.1.6. Particular continuous random variables.	Lecture, conversation, examples, explanation, demonstrations, exercises	1 hour

8.1.7. The simple and composed interest	Lecture, conversation, examples, explanation, demonstrations, exercises	1 hour
8.1.8. Prezent and future value of a single payment	Lecture, conversation, examples, explanation, demonstrations, exercises	1 hour
8.1.9. Staggered payments.	Lecture, conversation, examples, explanation, demonstrations, exercises	1 hour
8.1.10. Financial investments. Stocks and shares.	Lecture, conversation, examples, explanation, demonstrations, exercises	1 hour
8.1.11. The volatility of financial assets	Lecture, conversation, examples, explanation, demonstrations, exercises	1 hour
8.1.12. The risk of financial assets	Lecture, conversation, examples, explanation, demonstrations, exercises	1 hour
8.1.13. Life expectancy. Biometric functions. Mortality tables.	Lecture, conversation, examples, explanation, demonstrations, exercises	1 hour
8.1.14. Life insurances. Death insurances.	Lecture, conversation, examples, explanation, demonstrations, exercises	1 hour

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

8.2 Seminar (S)	Teaching methods	Observations
8.2.1. Introductory seminaire. Solving probability – related exercises	Lecture, explanation, exercises	1 hour
8.2.2. Solving probability – related exercises	Lecture, explanation, exercises	1 hour
8.2.3. Exercises related to discrete random variables	Lecture, explanation, exercises	1 hour
8.2.4. Exercises related to discrete random variables	Lecture, explanation, exercises	1 hour
8.2.5. Exercises related to continous random variables	Lecture, explanation, exercises	1 hour
8.2.6. Exercises related to particular continous random variables	Lecture, explanation, exercises	1 hour
8.2.7. The simple and composed interest	Lecture, explanation, exercises	1 hour
8.2.8. Prezent and future value of a single payment	Lecture, explanation, exercises	1 hour
8.2.9. Staggered payments.	Lecture, explanation, exercises	1 hour
8.2.10. Test	Lecture, explanation, exercises	1 hour
8.2.11. Exercises related to the prezent and future value of a single payment Exercises related to Interests and financial turn-overs	Lecture, explanation, exercises	1 hour
8.2.12. Exercises related to the volatility of financial assets . Exercises related to the risk of financial assets	Lecture, explanation, exercises	1 hour
8.2.13. Exercises related to life expectancy. Biometric functions. Mortality tables.	Lecture, explanation, exercises	1 hour
8.2.14. Exercises related to life insurances. Death insurances.	Lecture, explanation, exercises	1 hour

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

9. 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 withwhatisbeingstudied in otheruniversities in our country andabroad. ▪ Tobetteradaptthecontents of the discipline to market demandstherehavebeenmeetingsheldwiththerepresentatives of severalcompanies in Oradea.

10. Assessment

Type of activity	10.1 Assessment criteria	10.2 Assessment methods	10.3 Percentage of the final grade
10.4 Course (C)	The assimilation of notions. Specific languagecoherence.	Written paper	60%
10.5 Seminar (S)	The capacitytocorrectly solve a exercise.	1 written paper during the semester	40%
10.9 Minimum performance standard			
▪ The abilitytousebasic conceptsto solve a simple mathfinancialproblem. ▪ The correctinterpretation of thevaluesobtained in a financialmathematics problem. ▪ Obtaining at leastthe 4,50 grade at thewrittenpaperduringtheexamsession			

Date **Course titleholder:** **Seminar titleholder:**

28.09.2020 **Associate Professor, Ioana Teodora MEȘTER, PhD**

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Director of Department,

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Date of approval in the Department:

29.09.2020

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

30.09.2020

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