TARAS SHEVCHENKO NATIONAL UNIVERSITY OF KYIV
FACULTY OF ECONOMICS

Insurance, Banking and Risk Management Department

COURSE PROGRAMME

BUSINESS INTELLIGENCE

for students

Area of study	**07 Management and Administration**
Specialty	**073 Management**
Level	**Master**
Educational program	**Management Organizations and Administration**
Course type	**Optional**

Form of training	Full-time
Academic year	2021 /2022
Semester	4
Number of ECTS credits	4
Language of teaching, learning and assessment	English
Form of final control	Final test

Lecturer:
Mariia Balytska, Ph.D., Assistant of Department of Insurance, Banking and Risk Management Department

Prolonged: 20 __ / 20__ _____ (_____) «__» ___ 20__
(signature, name, date)

at 20 __ / 20__ _____ (_____) «__» ___ 20__
(signature, name, date)

KYIV - 2021

Developers: Mariia Balytska, Ph.D., Assistant of Department of Insurance, Banking and Risk Management Department

APPROVED
Head of Department of Insurance, Banking and Risk Management
_____ (Nataliia PRYKAZIUK)
Protocol No. 1 from «30» 08 2021

Approved by the Commission on Science and Methodological Commission of Faculty of Economics
Protocol from «31» 08 2021 No.1

Chairman of the scientific and technical committee (підпис) (Mariia KNIR)

1. The purpose of the discipline.

Formation of basic knowledge on the organization of methods of conducting business process analysis in the risk management system.

2. Prerequisites for mastering or choosing a course.

1. A prerequisite for successful mastering of the subject is the preliminary preparation of students in economics (macro and microeconomics) and computer science, subjects "Insurance", "Risk management", "Finance" and others.
2. Knowledge of basic fundamentals of economics, finance, management of computer science.

3. Abstract of the discipline.

This course provides an introduction to business intelligence, including the processes, methodologies, infrastructure and current practices that are used to transform business data into useful information and support business decision-making. Business analytics requires knowledge of the basics of the data storage and retrieval process, so this course examines logical data models for both database management systems and data warehouses.

The subject of study of the discipline are theoretical and practical provisions of business process analysis.

4. Tasks (learning objectives).

- formation of students' basic knowledge of business analytics and management information systems; understanding the role of data in supporting managerial decision-making; tools and concepts used to create and use the database; knowledge of how to select and use appropriate data mining algorithms and methods.

Integrated competence	Ability to solve complex problems and problems in the field of management or in the learning process, involving research and / or innovation under uncertain conditions and requirements.
General competence	GC 3. Skills in the use of information and communication technologies GC 6. Ability to generate new ideas (creativity) GC 7. Ability to abstract thinking, analysis and synthesis
Special competence	SC1. Ability to select and use management concepts, methods and tools, including in accordance with defined objectives and international standards SC2. Ability to set values, visions, mission, goals and criteria by which the organization determines further directions of development, to develop and implement appropriate strategies and plans SC3. Ability for self-development, lifelong learning and effective self-management SC5. Ability to create and organize effective communications in the management process SC6. Ability to form leadership qualities and demonstrate them in the process of managing people SC8. Ability to use psychological technology to work with staff SC9. Ability to plan and perform scientific and applied research, present their results SC 14. Ability to collect, systematize and analyze information about the client organization, to form proposals for organizational measures to solve certain problems

5. Learning outcomes of the discipline.

Learning result (1. know; 2. be able; 3. communication; 4. autonomy and responsibility)		**Forms (and / or methods and technologies) of teaching and learning**	**Assessment methods**	**Percentage of the final grade in the discipline**
Code	**Learning result**			
	Student is expected to know:			
1.1	Business Intelligence goals, values, and functions	lecture	Oral report, blitz poll, implementation creative analytic-estimated works, presentation	4%
1.2	the evolution of Business Intelligence	lecture		6%
1.3.	the role of information technology in business	lecture, seminar work		6%
1.4.	the concept and role of business processes and information systems	lecture,		4%
1.5.	classification of information systems	seminar work		6%
1.6.	organizing data and problems in a traditional file environment	lecture		8%
1.7.	the role of databases in master data management and their impact on business performance and decision making	lecture		8%
1.8.	the process of discovery of knowledge in databases, its role and implementation tools	seminar work		8%
1.9.	methods and stages of data mining in the KDD process	lecture,		4%
1.10.	business intelligence product classification	seminar work		6%
1.11.	the essence and ways of using text mining and WEB mining;	lecture,		4%
1.12.	the essence and directions of using Big Data in the process of business process analysis	seminar work		2%
1.13.	Financial data visualization	lecture, seminar work		4%
	Studenr is capable to do:			
2.1.	to carry out the estimation of statistics with the help of different software according to the set tasks, to analyze the results of ca3Kulations and to justify the conclusions obtained;	seminar work	Implementation creative analytically-estimated works, presentation, individual work	15%
2.2.	analyze and interpret financial, accounting and other information contained in the reporting of enterprises of different ownership forms, organizations, and use the information obtained to analyze business processes;	seminar work		
2.3.	to analyze information and statistical materials in order to assess the impact on the business processes of the enterprise, using modern methods and indicators of such assessment;	seminar work		

2.4.	use Big Data to analyze the business processes of a particular enterprise;	seminar work		
2.5.	use modern online resources to analyze the business processes of the enterprise;	seminar work		
2.6.	to compare business processes of enterprises and to form conclusions and recommendations on their improvement, in comparison with competitors.	seminar work		
	The student must demonstrate ability and readiness:			
3.1.	operate a wide range of knowledge in the study of different types of financial risks;	seminar work	Implementation creative analytically-estimated works, presentation, individual work	15%
3.2.	to use theoretical knowledge in practical activities;			
3.3.	solve problems and propose methods of minimizing financial risks;			
3.4.	to present and defend the results obtained in the form of reports and presentations using information and communication technologies and relevant economic terms;			
3.5.	work as a team.			

6. The ratio of results of studying discipline with program learning outcomes

Learning outcomes of the discipline (code)/ Program Learning outcomes	**1.1**	**1.2**	**1.3**	**1.4**	**1.5**	**1.6**	**1.7**	**1.8**	**1.9**	**1.10**	**1.11**	**1.12**	**1.13**	**2.1**	**2.2**	**2.3**	**2.4**	**2.5**	**2.6**	**3.1**	**3.2**	**3.3**	**3.4**	**3.5**	**4.1**
Identify problems in the organization and justify methods for solving them (PRN2)			+				+	+	+	+	+	+	+	+	+	+	+	+	+						
Plan the activities of the organization in strategic and tactical sections (PRN5)									+	+	+	+	+	+	+	+	+	+	+				+		+
Have the skills to make, justify and ensure the implementation of management decisions in unpredictable conditions, taking into account the requirements of current legislation, ethical considerations and social responsibility (PRN6)	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+		+	+	+		+	+
Organize and carry out effective communication within the team, with representatives of various professional groups and in the international context (PRN7)																					+		+	+	
Demonstrate leadership skills and ability to work in a team, interact with people, influence their behavior to solve professional problems (PRN10)																							+	+	+
Identify and classify new tasks in the field of management, describe, analyze and evaluate relevant objects, phenomena and processes, choose the best methods for their study (PRN15)	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+						+
Apply modern methodological and methodological tools for managing consulting projects, justify management decisions for the development, implementation and monitoring of consulting changes in the client organization (PRN17)	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+						

7. Scheme of formation of assessment

The assessment is based on a module-rating system, which provides a two-tier evaluation of the learned material, in particular the evaluation of theoretical training (20%) includes: oral reports (60%) and surveys (40%) and evaluation of practical training (80%) calculation works: presentations (50%) and individual analytical and calculation tasks (50%).

7.1 Forms of student assessment:

The semester number of points is formed by the points received by the student in the process of mastering the material on all topics of content modules, the execution of all these creative works and the performance of individual analytical and calculation works.

- semester assessment:

No	Forms of control	The results of study	Marks (min / max)	Quantity
1	Oral report	1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 1.11, 1.12, 1.13	0,6/1	5
2	Poll blitz (written assignment)	1.3, 1.9	0,6/1	5
3	Performance of ca3Kulation and analytical tasks	1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 1.11, 1.12, 1.13	1,8/3	5
4	Presentation	1,2,3,4,5,6	1,2/2	5
5	Individual work		15/25	1
6	Modular Testing (MKR)	1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 1.11, 1.12, 1.13	9/15	1

- final assessment in the form of final test:

The final control is carried out in the form of a written or oral test , which lasts 1 hour. 30 minutes The maximum number of points in the final test is 25 points, the minimum number of points added to semesters is 15 points *(60 % of the maximum number of points allocated for the final test)* .

The student is admitted to the final test if:

- fulfillment of all the planned works;
- the total amount of points scored during the semester must meet the recommended minimum for admission to the final test - 45 points.

Semester points		Final Test	Final evaluation
Minimum	45	15	60
Maximum	**75**	**25**	**100**

7.2 Organization of assessment: Assessment is carried out throughout the semester of all types of work, including independent work. The defense of analytical and computational tasks and presentations occurs at seminar sessions after the end of teaching the topic at the lecture, but not later than 2 weeks after the end of the topic.

7.3 Rating scale

Passed	60-100
Fail	0-59

STRUCTURE OF THE EDUCATIONAL DISCIPLINE

№	The name of the topic	Amount of hours		
		Lectures	**Laboratory work**	**Individual work**
CONTENT MODULE 1. Introduction to the theory of business analysis and business process management				
1	Introduction to the theory of business process analysis	4	6	10
2	Use of information technology in business			10
3	Classification of information systems	2		10
4	The basics of business intelligence: databases			10
5	The knowledge discovery in databases (KDD) process	2	4	10
	Modular control work	2		
CONTENT MODULE 2. Practical tools for business process analysis				
6	Business intelligence product classification	2	2	10
7	Analytical Data Processing - OLAP		2	10
8	Financial Data Visualization	2	2	8
9	The role of financial technologies in the development of BI			8
	Modular control work	2		
	Total	16	16	86

Total - 120 hours.

–lectures - 16 hours.
–laboratory work - 16 hours.
–independent work - 86 hours.
–consultations - 2 hours.

9. Recommended sources:

Main:

1. Положення про організацію освітнього процесу у Київському національному університеті імені Тараса Шевченка [Електронний ресурс] // офіц. веб-сайт URL : http://www.univ.kiev.ua/pdfs/official/Organization-of-the-educational-process.pdf
2. Освітньо-наукова програма «Менеджмент організацій і адміністрування» [Електронний ресурс] // офіц. веб-сайт URL : econom.univ.kiev.ua/wp-content/uploads/2018/06/2020_ONP_MOiA.pdf
3. Управління фінансовими ризиками: Навчальний посібник / Р.В. Пікус, Н.В. Приказюк. – К. : Знання, 2010. – 598 с.
4. Управління фінансовими ризиками: Опорний конспект лекцій / Р.В. Пікус, Н.В. Приказюк. – Кам'янець-Подільський: Аксіома, 2010. – 228 с. /110 с.
5. Управління фінансовими ризиками: лаборатор. практикум / Р.В. Пікус, Н.В. Приказюк, Г.Ю. Тлуста. - К.: Логос, 2012. - 280с.
6. Антикризовий менеджмент : Навчально-методичний комплекс / В.І. Нечипоренко, С.А Шимків. – К.: Видавничо-поліграфічний центр "Київський університет", 2017. -с.1-41.
7. Міждисциплінарний словник зі страхування та ризик-менеджменту / [Р.В.Пікус, Н.В.Приказюк, О.М. Лобова та ін]; за наук. ред. проф. Р.В. Пікус. – К.:Логос, 2015. – 508 с.

Additional:

1. A Guide to the Business Analysis Body of Knowledge (BABOK Guide) // International Institute of Business Analysis, Canada. – 2017. – v. 2.0. – 264p.
2. Marketing Research: An Applied Orientation / Naresh K. Malhotra, David F. Birks. – Prentice Hall Inc, 2017. – 3nd ed. – 835p.
3. Thomas H. Davenport and Jeanne G. Harris. Competing on analytics: the new science of winning. // HBS Publishing Corporation. – 2017.- 218pp
4. Rygielski C., Wang J.-C., Yen D.C. Data mining techniques for customer relationship management. // Technology in Society. – Vol. 24. – 2018. – pp.483-502.
5. Data Mining Techniques for Marketing, Slaes and Customer Relationship Management / Michael J.A. Berry, Gordon S. Linoff. – Wiley Publishing, Inc, 2016. – 2nd ed. – 643p.
6. Data Mining: Concepts and Techniques / Han J., Kamber M. – Elsevier Inc, 2016. – 2nd ed. – 745p.
7. Fayyad U., Piatetsky-Shapiro G., Smyth P. From Data Mining to Knowledge Discovery in Databases. Available from: http://www.kdnuggets.com/gpspubs/aimag-kdd-overview-2016-Fayyad.pdf
8. Management Information Systems / Kenneth C. Laudon, Jane P. Laudon. – Pearson Education, Inc, 2016. – 10th ed. – 117p.