МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ХАРКІВСЬКИЙ НАЦІОНАЛЬНИЙ ЕКОНОМІЧНИЙ УНІВЕРСИТЕТ
ІМЕНІ СЕМЕНА КУЗНЕЦЯ

ЗАТВЕРДЖЕНО
на засіданні кафедри
кібербезпеки та
інформаційних технологій
Протокол № 2 від 31.08.2023 р.

ПОГОДЖЕНО
Проректор з навчально-методичної роботи
_____ Каріна НЕМАШКАЛО

ІНФОРМАЦІЙНІ СИСТЕМИ В ІННОВАЦІЙНІЙ ДІЯЛЬНОСТІ

робоча програма навчальної дисципліни (РПНД)

Галузь знань	**07 Управління та адміністрування**
Спеціальність	**073 Менеджмент**
Освітній рівень	**перший (бакалаврський)**
Освітня програма	**Логістика**
Статус дисципліни	**вибіркова**
Мова викладання, навчання та оцінювання	**англійська**

Розробник:
д.т.н., проф. _____ Ольга СТАРКОВА

Завідувач кафедри
кібербезпеки та
інформаційних технологій _____ Ольга СТАРКОВА

Гарант програми _____ Тетяна КОЛОДІЗЄВА

Харків
2023

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SIMON KUZNETS KHARKIV NATIONAL UNIVERSITY OF ECONOMICS

APPROVED
at the meeting of the department
of cybersecurity and
information technologies
Protocol № 2 of 31.08.2023.

AGREED
Vice-rector for educational and methodical work

Karina NEMASHKALO

INFORMATION SYSTEMS IN INNOVATIVE ACTIVITIES
Program of the course

Field of knowledge	**07 Management and administration**
Specialty	**073 Management**
Study cycle	**first (bachelor)**
Study programme	**Logistics**
Course status	**elective**
Language	**English**

Developer:
Dr. Sc. (Engineering), prof. Olha STARKOVA

Head of Cybersecurity and
Information Technologies
Department Olha STARKOVA

Head of Study Programme Tatiana KOLODIZIEVA

Kharkiv
2023

INTRODUCTION

In today's globalized economic space, the successful operation of enterprises and organizations depends on whether they can generate new ideas, translate them into practical activities, and become leaders in the competition. All these issues are solved thanks to the use of innovations.

The study of the course "Information systems in innovative activity" will give the applicants the opportunity to form knowledge about ensuring the innovative development of economic systems and evaluating the innovative potential. The discipline, in particular, considers general issues of innovative development, the impact of innovations on the economy, development, organizational forms of innovative development of enterprises, global scientific and technical and informational communications in the field of innovation, informational and communication technologies in the context of innovative development, globalization of innovative development and informational communications, problems of information provision of innovations, strategies and business models of innovative development of the enterprise, innovative potential of the enterprise, risks in innovative activities and their management.

The purpose of the course is the formation of knowledge and skills in the field of application of information technologies, innovative development, their use in various spheres of activity, mastering methods and means of creation, technological support of automated information systems in various fields.

The task of the course is the formation of the students' knowledge system regarding the provision of innovative development of economic systems and the evaluation of innovative potential with the use of modern information systems and technologies.

The subject of the course is information systems and technologies in innovative activities.

The object of the course is knowledge of the basics of innovation policy, information technology in the context of innovative development and their management.

The learning outcomes and competencies formed by the course are defined in table 1.

Table 1

Learning outcomes and competencies formed by the course.

Learning outcomes	Competencies
LO4	GC8, SC12
LO6	GC8, SC12

where, GC8. Skills in the use of information and communication technologies;

SC12. Ability to analyze and structure the problems of the organization, to formulate reasonable solutions;

LO4. Demonstrate skills in identifying problems and justifying management

decisions;

LO6. Demonstrate skills in searching, collecting and analyzing information, calculating indicators to justify management decisions.

COURSE CONTENT

Topic 1 . Key concepts of innovative development.

1.1 Innovations: economic essence, classification, types.

1.2 The essence of innovative activity.

1.3 Innovative product and innovative products.

Topic 2. Innovations and cyclicality of economic development.

2.1 Cyclical nature of innovative development.

2.2 The influence of technological systems on innovative development.

Topic 3. The essence and organizational forms of innovative development of enterprises.

3.1 The essence and classification of directions of innovative development of enterprises.

3.2 Innovation market infrastructure and its components.

Topic 4. Global scientific and technical and informational communications in the innovative sphere.

4.1 The essence of information and communication technologies in the context of innovative development.

4.2 Problems of information provision of innovations.

Topic 5. Strategies and business models of innovative development of the enterprise.

5.1 Strategic innovative development of the enterprise.

5.2 Business models of innovative development of the enterprise.

Topic 6. Innovative potential of the enterprise.

6.1 Elements of the innovative potential of the enterprise.

6.2 Methodology of comprehensive assessment of innovative potential.

Topic 7. Risks in innovative activities and their management.

7.1 Factors of risk formation in the innovative activity of the enterprise.

7.2 Methods of risk analysis when assessing the feasibility of innovative projects.

The list of laboratory studies in the course is given in Table 2.

Table 2

List of laboratory studies

Name of the topic and / or task	Content
Topic 1. Laboratory work 1.	The choice of the innovative strategy of the enterprise based on the Bayesian hypothesis evaluation
Topic 2. Laboratory work 2.	Evaluation of the effectiveness of investment projects
Topic 3. Laboratory work 3.	Calculation of the efficiency of capital investments
Topic 4. Laboratory work 4.	Calculation of future contributions
Topic 5. Laboratory work 5.	Calculation of periodic payments for investments in investment projects
Topic 6. Laboratory work 6.	Calculation of depreciation deductions in the investment project
Topic 7. Laboratory work 7.	Selection of the optimal innovative project using the method of analysis of hierarchies

The list of self-studies in the course is given in table 3.

Table 3

List of self-studies

Name of the topic and / or task	Content
Topic 1. Task 1	Signs, goals and criteria of innovative development.
Topic 1. Task 2.	Prerequisites and factors of innovative development of the enterprise.
Topic 2. Task 3.	Spheres, subjects and objects of innovative activity.
Topic 2. Task 4.	Innovative enterprise and its features.
Topic 3. Task 5.	The structure and algorithm of developing a strategy for innovative development of the enterprise.
Topic 4. Task 6.	Types of innovative enterprise development strategies.
Topic 5. Task 7.	Sources and methods of generating ideas for innovation.
Topic 6. Task 8.	Types of demand for innovation and factors influencing it.
Topic 6. Task 9.	Peculiarities of innovative activity at small enterprises.
Topic 7. Task 10.	Examination of innovative projects.
Topic 7. Task 11.	Infrastructure of innovative activity.

The number of hours of lectures, laboratory studies and hours of self-study is given in the technological card of the course.

TEACHING METHODS

In the process of teaching an course, in order to acquire certain learning outcomes, to activate the educational process, it is envisaged to use such learning methods as:

Verbal (lectures 1-7), problematic lecture (Topic 7).

In person (demonstration (Topic 1-7)).

Practical (laboratory work (Topics 1-7)).

FORMS AND METHODS OF ASSESSMENT

The University uses a 100-point cumulative system for assessing the learning outcomes of students.

Current control is carried out during lectures and laboratory classes and is aimed at checking the level of preparedness of the student of higher education to perform specific work and is evaluated by the sum of points scored:

– for disciplines with a form of semester control examination (exam): the maximum amount is 60 points; the minimum amount that allows a student of higher education to pass an exam (examination) is 35 points in.

The final control includes the semester control and certification of the student of higher education.

Semester control is conducted in the form of a semester exam (exam). The semester exam (exam) is taken during the exam session.

The maximum number of points that a student of higher education can receive during the examination (examination) is 40 points. The minimum amount for which the exam is considered passed is 25 points.

The final grade by course is determined for disciplines with the form of semester control exam (exam) - the summation of points for the current and final control.

During the teaching of the academic discipline, the following control measures are used:

Current control: Laboratory work (50 points), written control work (10 points).

Semester control: Grading including Exam (40 points).

More detailed information about the evaluation system is given in the work plan (technological map) for the academic discipline.

An example of an examination ticket and evaluation criteria for an academic discipline

An example of an examination ticket

SIMON KUZNETS KHARKIV NATIONAL UNIVERSITY OF ECONOMICS
First (bachelor) level of higher education
Specialty "Management"
Study programme "Logistics"
Course "Information systems in innovative activity"

Examination ticket No. 1

1. The essence of innovative activity (10 points).
2. Risk formation factors in the innovative activity of the enterprise (10 points).
3. Determine how it is more profitable to invest money in an innovative project according to some investment scheme for a certain period T (for example, twice for three months or once for 6 months), if the bank accepts a deposit for a certain period

T1 at P% per annum or for another term T2 under RR % per annum (compound interest)? Determine the scaling factor. Develop an information system for automating the calculation by the means chosen by the applicant (20 points).

Term deposit, months T1, T2	Rate, %, R%, PP %	Scheme of investing money
3 6	70 90	Once every three months or twice for 6 months

EVALUATION CRITERIA

performance of examination tasks during the examination

The exam ticket contains three questions: the first two are theoretical, the third is practical. The final grade for the exam is the sum of the marks for each task. In general, the completed examination work is evaluated on a 40-point scale. Answers to questions must be clear, reasoned, with unambiguous interpretation. Ambiguously interpreted answers are not counted as correct.

Answers to the first two questions are evaluated as follows:

Maximum number of points	Requirements
10 points	A correct, complete and comprehensive answer to the question, a complete description of the content of the problem, a sufficient number of examples.
8 points	Correct and complete definition of terms, full description of the content of the problem, insufficient number of examples.
6 points	Incomplete definition of terms, incomplete description of the content of the problem, insufficient number of examples.
4 points	Lack of definition of the term or incomplete description of the content of the problem, no examples.
2 points	There is no definition of the term or description of the content of the problem, the available part of the answer is incomplete, there are no examples.
0 points	No response.

The answer to the third question is evaluated as follows:

Maximum number of points	Requirements

20 points	A correct, complete and comprehensive answer to the question, an economic-mathematical model was developed, an information system was developed for the automation of calculations, the calculations were carried out correctly, the developed information system was flexible.
18 points	A correct, complete and comprehensive answer to the question, an economic-mathematical model has been developed, an information system has been developed to automate calculations, the calculations have been carried out correctly, the developed information system cannot be developed.
16 points	A complete answer to the question, an economic-mathematical model was developed, an information system was developed to automate calculations, the calculations were partially correct, the developed information system cannot be developed.
14 points	An incomplete answer to the question, an economic-mathematical model was developed, an information system for the automation of calculations was partially developed, the calculations were performed partially correctly.
12 points	Incomplete answer to the question, partially developed economic-mathematical model, developed information system for automating calculations, calculations were carried out.
10 points	An incomplete answer to the question, an economic-mathematical model has been developed, an information system for the automation of calculations has been partially developed, calculations have not been carried out.
8 points	An incomplete answer to the question, an economic-mathematical model has been developed, an information system for automating calculations has not been developed, calculations have not been carried out.
6 points	Incomplete answer to the question, partially developed economic-mathematical model, partially developed information system for automating calculations, calculations not carried out.
4 points	An incomplete answer to the question, a partially developed economic-mathematical model, an information system for automating calculations has not been developed, calculations have not been carried out.
2 points	An incomplete answer to the question, a partially developed economic-mathematical model, an information system for automating calculations has not been developed, calculations have not been carried out.

0 points	No response.

RECOMMENDED LITERATURE

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