

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

Syllabus
of the academic discipline
"MANAGEMENT OF INNOVATIONS"
for full-time students
of training direction 6.030601 "Management"

Харків. ХНЕУ ім. С.Кузнеця, 2016

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Самостійне електронне текстове мережеве видання

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A thematic plan of the academic discipline is given after the modules and themes. Plans of lectures and seminars (practical studies), questions for independent training, criteria for assessing students' knowledge are presented.

Recommended for students of training direction 6.030601 "Management".

Наведено тематичний план навчальної дисципліни за модулями та темами. Подано плани лекцій та семінарських (практичних) занять, запитання для самостійної роботи, критерії оцінювання знань студентів.

Рекомендовано для студентів напряму підготовки 6.030601 "Менеджмент".

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Introduction

In the transformation of the economy innovation management is especially relevant and important at macro-, meso- and microlevels. Formation, development and operation of businesses and innovation will ensure the strategy for the innovative model of development of the national economy of Ukraine and especially requires highly skilled managerial staff. And so today, managers must possess the theory and practice of innovation management to propose and justify appropriate effective management decisions.

The importance of the issues considered in the academic discipline "Management of Innovations", is explained by the fact that future managers need to know the organizational and economic methods and forms of management of all stages and types of innovation processes not only at the level of primary economic entities (firms, companies, corporations) but also in other parts of the economy, industries and regions as a whole to justify management decisions.

The academic discipline "Management of Innovations" refers to the compulsory cycle of professionally oriented disciplines studied within the curriculum for Bachelor's academic qualification of training direction 6.030601 "Management".

The academic discipline "Management of Innovations" is closely related to the following disciplines: "Economic Theory", "Finance", "Management", "Economics of an Enterprise".

1. Description of the academic discipline

Indicator	Subject area, training direction, educational qualification	Characteristics of the academic discipline
		Full-time form of study
Number of credits: 3	Subject area 0306 "Management and Administration"	Regulatory
Content modules: 2	Training direction 6.030601 "Management"	Academic year
Total hours: 108		4
		Semester
		1 (7)
		Lectures
Hours per week for full-time form of study: in class: 3	Educational qualification: Bachelor	18 hours
		Practical (seminar) studies
		26 hours
		Independent training
		64 hours
		Assesment: examination, 2 hours

Class hours to independent training ratio is 68.75 %

2. The purpose and objectives of the academic discipline

The purpose of the academic discipline is: formation of theoretical knowledge and practical skills for using theoretical knowledge of organization and management of innovative activity of the company, as well as tools and methods of development of innovation strategies and methods for assessing innovative projects.

The main objectives of the academic discipline are:

to familiarize students with the theoretical, methodological and organizational approaches to innovation at the level of state, industry, region and business;

to learn the basics of organization and innovation management of companies of various forms of ownership and legal form of management:

to acquire theoretical knowledge and practical skills in substantiating management solutions in the field of innovation at all levels;

to practice the theoretical, methodological and organizational approaches to the evaluation of economic efficiency of innovative projects and innovation;

to develop students' ability to select and provide rationale for decision-making in the sphere of innovation activity.

The subject of the academic discipline is the study of theoretical and methodological approaches to the organization and management of innovations, tools, methods of development of innovative strategies for enterprise development, project efficiency and innovation.

To master the academic discipline students should have knowledge of the disciplines "Economic Theory", "Finance", "Economics of an Enterprise", "Marketing", "Management" and skills in the formation, development and improvement of innovation activities of organizations, as well as intermediate-level command of English.

The discipline enables students to obtain the general theoretical knowledge and form it into specific functional competences that will make the basis for further learning professionally-oriented disciplines and contribute to further rising of the training level.

Within the academic discipline students receive the necessary knowledge during lectures and seminars, carrying out practical tasks and individual training and test tasks. Also of great importance in the process of learning and getting knowledge is independent work of students.

All these types of activities are developed in accordance with the provisions of the Bologna Declaration.

As a result of learning the discipline students must have the following ***competences***:

understand the functioning of economic organization to gather information for decision-making in terms of innovation;

explore innovative space and opportunities for innovation at the enterprise;

determine the cost of developing innovation;

organize innovative activity at the enterprise;

use the techniques of portfolio management innovation;

to develop and justify innovation strategy;

determine the composition and structure of innovation expenditure;

evaluate and implement the project;

assess the risks of innovation;
assess the efficiency of innovative activity.

The structure of the components and formation of the professional competences and of the discipline "Management of Innovations" in accordance with the National Qualifications Framework of Ukraine is given in the Appendix A.

3. The syllabus of the academic discipline

Content module 1

Theoretical foundations of innovation management

Theme 1. The essence, development and basic concepts of the innovation process

The essence of the term "innovation". Classification of innovation, innovation process, innovation. The aspects of innovation and the development of competition.

Innovation management as a set of principles, methods and forms of management of innovation processes and innovation. Innovation process and innovation. The features of decision making in the management of innovation.

The evolution of theories of innovation. The formation of the innovation theory and its modern concept.

Theme 2. Innovative activity as an object of innovation management

The concept of innovation activity, its types and constituents. The fundamentals of scientific activity. Applied research and development. Design, science and technology, industrial innovation. Assessment of impacts of the external and internal environment on innovation.

Characteristics of the innovation infrastructure. The market of innovations. The market of investments. The pure competition market of innovations.

Theme 3. Government support of innovation activity

The state's role in the implementation of innovation. Innovation as a factor of economic growth. The value of innovation activity for the formation of a modern model of economic growth of the national economy of Ukraine. Market mechanisms in the field of scientific and technological activities.

The state as the main subject of innovation. The methods of state influence on the effectiveness of innovation processes. The methods of state support for innovation. Formation of a national regulatory model of innovation. The impact of private and public organizations on innovation.

The current status and prospects of innovative activity in Ukraine, especially, innovative development in the leading industrialized countries.

Theme 4. Organizational forms of innovation activity

The types of research, design and innovation organizations. The meaning of "industrial park", "techno" and "innovation incubator".

Organization of the research and information support for innovation processes. Organization and implementation of the transfer of scientific innovation. Small business innovation, the life cycle and trends. The features of management in research institutions and small innovative enterprises.

Innovative venture funds. The role of the venture capital in the development of innovation.

Scientific and technical cooperation. Forms of integration of science and production. Competition and cooperation in the field of modern innovative technologies. Types of industrial and technological cooperation.

Content module 2

Innovative Activity Management

Theme 5. Management of innovation development of an organization

The analysis of the organization's innovative possibilities: evaluation of an innovative environment, the state of innovation, scientific and technological potential, analysis of the parameters of the external and internal environment, resource analysis and investment opportunities, evaluation of technologies and manufacturing processes for their ability to implement

innovations, evaluation of social and organizational capabilities. Analysis of the competitive advantages of organizations.

Planning the system of innovations, the essence and the main types. Scientific and technological forecasting. The essence of project management. Organizational and technological preparation of production innovations. R&D organization. Analysis and forecasting of the scientific and technological, organizational and technological level of production. Management quality and competitiveness of new products.

Cost management in innovation. Composition and structure of innovation expenditures, their relationship with the strategy of innovative changes. Classification of expenditures on innovation by type of innovation, sources of funding. Expenditures on the stages of the innovation cycle.

Theme 6. Management of innovation projects

The innovation project: the concept, the main stages of development and implementation. Managing the innovation project as decision-making and implementation. The procedure for developing an innovative project.

Management of implementation of innovative projects. The source of innovation project. Informational support. Investment security. Creating and using different organizational forms of project management. HR in the implementation of an innovative project.

Management of competitiveness of an innovative project. Management of support and improvement of competitive advantage. Management of competitiveness and quality of new products. Management of marketing services and control over the competitiveness of the project.

Theme 7. Risk management in innovative activity

The basic theory of risk management. The essence of the concept of innovation and risk. Classification of innovation risks. Methods of risk assessment. Methods of analysis of uncertainty and risk. Methods of risk management.

Theme 8. Evaluating the effectiveness of innovation activity

The effectiveness of innovation. Characteristic of results and cost effectiveness of innovation. Innovative activity as an investment object.

Justification of economic efficiency of an innovation project. Criteria for evaluation of investment attractiveness and innovation projects. Methods for evaluating innovation projects. The analysis of innovative projects under uncertainty. Assessing the impact of uncertainty on the efficiency of the innovation project. Consideration of project risk in evaluating the effectiveness of innovative projects.

4. The structure of the academic discipline

From the very beginning of studying the academic discipline, every student should be acquainted with the syllabus of the discipline, forms of training, the structure, content and scope of each of its training modules, as well as all kinds of monitoring and methods of evaluation.

The educational forms provided under the syllabus of the academic discipline "Management of Innovations" are in the following forms: lectures, seminars, practical exercises, independent work of students, essays, tests.

The studying of the discipline consists of the training modules. A module is a relatively independent unit of a separate discipline, which logically combines several elements of the academic discipline in content and relationships.

The study of the discipline is effected through coherent and deep processing of content modules.

The thematic plan of the discipline "Management of innovations" consists of two modules (Table 2).

Table 2

The structure of a test credit of the academic discipline

Theme	The number of hours		
	Lectures	Practicals (seminars)	Independent training
1	2	3	4
Module 1. Theoretical foundations of innovation management			
Theme 1. The essence, development and basic concepts of the innovation process	2	4	7

Table 2 (the end)

1	2	3	4
Theme 2. Innovative activity as an object of innovation management	2	4	7
Theme 3. Government support for innovation activity	2	4	7
Theme 4. Organizational forms of innovation activity	2	4	7
Module 2. Innovative Activity Management			
Theme 5. Management of innovation development of an organization	2	4	7
Theme 6. Management of innovation projects	2	4	7
Theme 7. Risk management in innovative activity	2	2	7
Theme 8. Evaluating the effectiveness of innovation activity	4	0	11
Exam preparation			4
Total	18	26	64

5. Plans of seminars and practicals

A seminar is a form of instruction where the teacher organizes a discussion of certain topics for which students prepare thesis.

At each seminar the teacher evaluates the performances of students, their activity in the debate, the ability to formulate and defend their position.

A practical is a form of instruction where a teacher organizes a detailed consideration of individual students' theoretical learning. Students obtain skills and practical experience through individual performance of various tasks.

Practical studies are based on the previously prepared methodical material – tests serving to determine the level of students' mastery of the necessary theoretical terms, a set of tasks of varying complexity to be solved by the students in class.

A workshop includes a previous control of knowledge and skills of students. Teachers formulate a common problem and discuss it with students.

Workshops are held in classrooms with one academic group.

The list of topics of seminars and practicals on the academic discipline "Management of Innovations" is presented in Table 3.

Table 3

The structure of seminars and practicals

Theme	Questions	Hours	Recommended readings
1	2	3	4
Content module 1. Theoretical foundations of innovation management			
Theme 1. The essence, development and basic concepts of the innovation process	1. The theory of innovation development evolution. 2. Cyclical development and the theory of long waves of M. Kondratyev. 3. Technology and technological modes. 4. The theory of innovation. 5. Modern concepts of the theory of innovation development	4	Main: [1 – 3]. Additional: [12; 14]
Theme 2. Innovative activity as an object of innovation management	1. The strengths and weaknesses of innovation environment of the enterprise. 2. Innovation models	4	Main: [2; 6]. Additional: [13; 15]
Theme 3. Government support for innovation activity	1. The cumulative effect of innovation. 2. The cost of developing the innovation	4	Main: [3 – 5]. Additional: [11; 14]
Theme 4. Organizational forms of innovation activity	1. Forms of organization of the innovation activity. 2. A portfolio of innovations	4	Main: [1 – 3]. Additional: [11; 14]
Module 2. Innovative Activity Management			
Theme 5. Management of innovation development of an organization	1. Innovation strategy. 2. The structure of innovation costs.	4	Main: [3; 5]. Additional: [12; 15]
Theme 6. Management of innovation projects	1. Net present value. 2. Justification of an innovation project implementation	4	Main: [4; 6]. Additional: [11; 13; 15]
Theme 7. Risk management in innovative activity	Opportunities to minimize the risk of innovation activity	2	Main: [1; 2]. Additional: [11 – 15]

An example of a typical practical task (Theme 6. Management of innovation projects)

Task 1

Determine the feasibility of the suggested innovation project based on the calculated indicators and make conclusion about the implementation or

rejection of the project. The suggested innovation project involves implementation of a new production technology and it will provide:

- 1) profit growth by years: 3 150 thousand USD in the 1st year, 3 600 thousand USD in the 2nd year, 4 600 thousand USD in the 3rd year, 5 500 thousand USD in the 4th year, 7 151 thousand USD in the 6th year
- 2) 14 % credit rate, 6 % inflation, 7 % loan default risk;
- 3) the calculation period is 5 years;
- 4) the initial investment resources for this innovation project are 2 590 thousand USD.

6. Questions for self-control

1. The features of decision making in the management of innovation.
2. The evolution of theories of the innovation. The formation of the innovation theory and its modern concept.
3. The market of innovations.
4. The market of investments.
5. The pure competition market of innovation.
6. Innovative venture funds. The role of the venture capital in the development of innovation activity.
7. Scientific and technical cooperation. Forms of integration of science and production.
8. The cost management in innovation.
9. Classification of expenditure on innovation by type of innovation, sources of funding.
10. Expenditures on the stages of the innovation cycle
11. Management of competitiveness of the innovative project.
12. Management of competitiveness and quality of new products.
13. Management of marketing services and control over the competitiveness of the innovation project.
14. Innovative risk management techniques.
15. Criteria for evaluation of investment attractiveness and innovation.
16. Methods for evaluating innovation projects.
17. Assessing the impact of uncertainty on the efficiency of the innovation project. Consideration of project risks.
18. The innovative potential of an enterprise.
19. Innovation management of an enterprise.
20. Investment management providing innovative enterprise

development.

21. Managing innovation projects of an enterprise.
22. Forming a business plan of the innovation project.
23. Business planning of innovative projects.
24. Innovation management of an enterprise.
25. The system performance of innovative projects.
26. Innovation strategy of an enterprise.
27. Innovation strategy of a region.
28. Innovation strategy of an industry.
29. Innovative risk management.
30. Formation of the enterprise innovative policy.
31. Financial support for innovation activity of an enterprise.
32. Managing innovation projects.
33. The innovative activity of enterprises.
34. Rationale behind the implementation of innovative projects.
35. Planning an innovative enterprise.
36. The impact factors of the internal environment on the innovation capacity (innovation) of an enterprise.
37. Influence of environmental factors on the innovation potential (innovation) of an enterprise.
38. Enterprise innovation and competitiveness.
39. Managing enterprise diversification.
40. Organizational and economic development of innovation activity of enterprises.
41. The formation of the innovation capacity of an enterprise.
42. The effectiveness of innovation activity of an enterprise.

7. Individual consulting work

Individual consulting work is advisory work in the form of: individual lessons, consultations, checking of individual tasks, verification and security of the task designed for the current control.

The forms of individual and advisory work are:

a) the theoretical material:

consulting: individual (question – answer);

group (considering typical examples – cases);

b) learning the practical material:

individual and group counselling;

c) a comprehensive assessment of the syllabus material:
individual presentation of works.

8. The methodology aiming to enhance the learning process

The following are used In the teaching of the academic discipline to enhance the learning process: active and interactive methods, business games, role play games, trainings and seminars in the active form, cases, moderation (Table 4). The main difference of active and interactive teaching methods from traditional ones is not only defined by the methods and techniques themselves, but the efficiency of the educational process, which is manifests itself in

- highly motivated students;
- consolidation of the theoretical knowledge in practice;
- raising awareness of students;
- developing the ability to make independent decisions;
- developing the ability to make collective decisions;
- developing the capacity for social integration;
- acquiring skills in resolving conflicts;
- development of the ability to compromise.

Table 4

Distribution of forms and methods of the active learning process after the themes of the academic discipline

Theme	Practical application of the educational technology
1	2
<i>Theme 1.</i> The essence, development and basic concepts of the innovation process	A problem lecture on the theme "The role of innovations in the development of society"
<i>Theme 2.</i> Innovative activity as an object of innovation management	A mini-lecture, a seminar-discussion on the theme "The pros and cons of the innovation space of an enterprise"
<i>Theme 3.</i> Government support for innovation activity	A seminar-discussion on the theme "The potential effect from innovations"; presentation of the work in small groups
<i>Theme 4.</i> Organizational forms of innovation activity	A problem lecture on the theme "The portfolio management in the innovation sphere"

Table 4 (the end)

1	2
<i>Theme 5.</i> Management of innovation development of an organization	A case analysis on the theme "Analysis of the structure of innovation costs"; presentation of the work in small groups
<i>Theme 6.</i> Management of innovation projects	A mini-lecture on the theme "Assessment and realization of innovation project"
<i>Theme 7.</i> Risk management in innovative activity	A seminar-discussion on the theme "Opportunities of minimization of innovation activity risks"
<i>Theme 8.</i> Evaluating the effectiveness of innovation activity	A problem lecture on the theme "Measuring the innovation potential"

Problem lectures aim to develop logical thinking of students and are characterized by the fact that the range of themes is limited to two or three key points, students' attention is focused on the material that is not covered in the textbooks, the experience of foreign schools is used as to the distribution among students of the printed material highlighting the main conclusions of the issues addressed during lectures. In lectures students are given questions for self-reflection, but the lecturer is responsible for them, not waiting for students' answers. The issues considered during a lecture motivate students to participate in role plays, focus on problem resolution and start to think actively searching for the right answer.

Mini-lectures include presentation of the educational material in a short period of time and are characterized by large capacity, complexity of logical theories, images, proofs and generalizations. Mini-lectures are usually held as part of a lesson-study.

Small group work is used to enhance students' work during the seminars and workshops. So-called groups of psychological comfort are formed, where each participant plays a special role in solving the problem. Using this technology allows the teacher to structure practical seminars in form and content, create opportunities for the participation of each student in the class work on the theme, and provide the personality experience of social intercourse.

Seminar-discussions involve the exchange of ideas and views of participants on the theme and develop thinking, help to shape attitudes and beliefs, develop the ability to formulate and express their ideas, and learn to evaluate proposals of others, form a critical approach to their own views.

A case method (a method of analyzing specific situations) allows you to bring learning to the real practice of experts and involves consideration of

operational, management and other situations of complex cases of conflict, problem situations, incidents in the process of learning.

Presentations – speaking to an audience – are used to represent certain advances of the work group, a report on individual tasks, instruction, demonstrations of new products and services.

A roleplay game (staging) is a form of the educational process where students are involved in the process of staging a production situation as direct participants in the events.

9. The system of current and final assessment

Control measures include current and final assessment:

1. Current control takes place at lectures and practical lessons (seminars), evaluated by the total number of points gained during the semester (the maximal possible number is 60 points, the minimal required number is 35 points).

2. Final control takes place at the end of the semester in the form of an examination (the maximal possible number is 40 points, the minimal required number is 25 points).

Current control is carried out in the following forms:

active work at lectures;

performance of practical tasks and active participation in their discussions;

preparation and presentation of materials at seminars and active participation in discussions during seminars;

current tests.

Evaluation is conducted on a 100-point accumulative scale which is presented in Table 5.

Evaluation of knowledge is based on solving the test tasks. Tests cover the main themes of the academic discipline. They consist of a set of questions which must be answered "yes", "no" or in a particular word.

Table 5

Contribution of points by forms and methods of studying

Themes	Lectures	Practicals	Practical tasks by themes	Essay	Presentation	Test	Total
1	2	3	4	5	6	7	8
Theme 1. The essence, development and basic concepts of the innovation process	0.5	1			3		4.5
Theme 2. Innovative activity as an object of innovation management	0.5	1	5				6.5
Theme 3. Government support for innovation activity	0.5	1				5	6.5
Theme 4. Organizational forms of innovation activity	0.5	1	5				6.5
Theme 5. Management of innovation development of an organization	0.5	1					1.5
Theme 6. Management of innovation projects	0.5	1	5			5	11.5
Theme 7. Risk management in innovative activity	0.5	0.5					1
Theme 8. Evaluating the effectiveness of innovation activity	1			6		15	22
Examination							40
Total	4.5	6.5	15	6	3	25	100

Test results are evaluated on the 5-point scale according to the percentage of correct answers to the test tasks:

mark 5.0: 91 – 100 %	mark 2.5: 41 – 50 %
mark 4.5: 81 – 90 %	mark 2.0: 31 – 40 %
mark 4.0: 71 – 80 %	mark 1.5: 21 – 30 %
mark 3.5: 61 – 70 %	mark 1.0: 11 – 20 %
mark 3.0: 51 – 60 %	mark 0.5: 0 – 10 %

A typical structure of the current control test on the academic discipline "Management of Innovations"

Problem 1 (2 points)

The investor has to decide on the implementation of an innovative project I or II. Describe the projects in terms of the expected cumulative effect and risk of their implementation. A possible profit and the probability are presented in Table 6.

Table 6

Initial data

Project I		Project II	
profit	probability	profit	probability
3 000	0.5	10 000	0.25
4 000	0.3	1 500	0.6
4 500	0.2	2 000	0.15

Problem 2 (2 points)

In the transition from the base to a new technological process of manufacturing parts, variable costs decrease from 6 to 4.5 USD and semi-fixed costs increase from 45 to 105 USD.

Compare the options. Does it make sense to attract investment resources to change the production line?

Problem 3 (2 points)

Determine the payback period of the project if the cash flow as a result of implementing it is 35 000 in the first year, 50 000 in the second year, while the initial cost is 50 000. The discount rate is 24 %.

Problem 4 (4 points)

Table 7 shows the distribution of investments by the year of construction. Choose the best option considering the time factor when the real rate of return on investment is 10 % per year.

Table 7

Investments

Variant of construction	Periods of construction					Total, thou USD
	1	2	3	4	5	
A	200	400	400	400	120	1 520
B	400	400	400	200	120	1 520

A typical structure of the examination card

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ECONOMICS

Direction of study 6.030601
the academic discipline "Management of innovations"
Exam card

Tests (2 point each)

1. Changes in the underlying mental models which frame what the organization does:
 - a) product innovation;
 - b) paradigm innovation;
 - c) process innovation;
 - d) position innovation.
2. What characteristics belong to incremental innovation?
 - a) linear trajectory;
 - b) discontinuous trajectory;
 - c) existing technology;
 - d) discovery-based learning.
3. Choose the internal factors of choice of innovation strategy:
 - a) financing;
 - b) the structure of the business area;
 - c) competition;
 - d) success of the current business model.
4. What does not belong to an evolutionary product?
 - a) new packaging;
 - b) technological breakthrough;
 - c) improvement of the existing company product.
5. What does not belong to supporting structures of the project?
 - a) a consulting firm;
 - b) technologies;
 - c) the patent licensing firm.
6. Choose the innovation projects by the type of innovation:
 - a) a new method of manufacturing;
 - b) scientific and technical projects;
 - c) new needs;

d) a new market.

7. Choose the qualitative methods of selecting innovation projects:

a) benefit/cost ratio;

b) q-sort method;

c) the aggregate project planning framework;

d) the discounted cash flow method.

Diagnostic task 1 (8 points)

The investor has to decide which implementation of innovative project III or V. Describe the projects in terms of the expected cumulative effect and risk of their implementation. A possible profit and the probability are presented in the Table 8.

Table 8

Initial data

Project III		Project V	
profit	probability	profit	probability
1 500	0.1	4 000	0.15
3 000	0.7	5 000	0.2
4 000	0.2	6 000	0.65

Diagnostic task 2 (8 points)

Based on initial data on the expected cash flow of the innovation project (Table 9), justify the economic feasibility of the administrative decision to implement of the innovation project or reject it, if the initial investment is 480 000 USD. Take into account that inflation is assumed at 12 %, a risk factor for loan default is 15 %.

Table 9

Projected cash flows of innovation project

Year	1	2	3	4
Cash flow, ths. UAH	110	260	280	350

Heuristic task (10 points)

The suggested innovation project involves implementation of a new production technology. Based on the initial data contained in Tables 10 and 11 determine the net present value (NPV) of the innovation project and draw a conclusion about the innovation project feasibility.

Table 10

Income and expenses in the prices of the base period

No	Period	Income, mln USD	Expenses, mln USD
1	1 year	6.0	2.0
2	2 year	7.0	3.0

Table 11

Forecast of an inflation rate

No	Period	Income, %	Expenses, %
1	1 year	120	110
2	2 year	110	130

Primary costs for the innovation project are 7 mln;

The life cycle of the innovation project is 2 years;

Depreciation per year is 1.8 mln;

The rate of income tax is 25 %;

The weighted average cost of capital that takes into account the inflation premium is 210 %.

Evaluation criteria for a written exam

The exam card includes the following tasks: tests, two diagnostic tasks, one heuristic task.

Tests (the maximum score is 14 points)

Mark 13–14 is given if 7 test questions have correct answers.

Mark 11–12 is given if 6 test questions have correct answers.

Mark 9–10 is given if 5 test questions have correct answers.

Mark 7–8 is given if 4 test questions have correct answers.

Mark 5–6 is given if 3 test questions have correct answers.

Mark 3–4 is given if 2 test questions have correct answers.

Mark 1–2 is given if 1 test questions have correct answers.

Diagnostic tasks (the maximum score is 8 points).

Mark 8 is put given for full assimilation of the program material and the ability to navigate in it, conscious application of knowledge to solving practical

situations. When performing diagnostic tasks the student must draw correct conclusions about the proposed industrial situation and formulate his own recommendation on the improvement of the problem. The design of the completed task should be neat.

Mark 6 – 7 is given for full assimilation of the program material and the ability to navigate in it, conscious application of knowledge to solving the problem of diagnostics. The design of the completed task should be neat.

Mark 4 – 5 treats a partial ability to apply the theoretical knowledge to solving practical problems, if the task is partially completed; the student's responses demonstrated an understanding of the basic material provisions of the discipline.

Mark 2 – 3 is given for assimilation of a large piece of the material, but performing the diagnostic problem without sufficient understanding of the uses of the educational materials and failure to correctly perform all the tasks.

Mark 0 – 1 is given for failure to do the task in general.

Heuristic task (the maximum score is 10 points).

Mark 10 is given for deep knowledge of the syllabus material, the application of both the recommended and additional literature and a creative approach, a thorough knowledge of the concepts, methods, techniques, tools and financial sciences, the ability to use them to solve specific practical problems and industrial situations. In the performance of the heuristic problem the student must provide a production version of the proposed decision on the situation and draw the appropriate conclusions. The design of the task should be neat, logical and consistent.

Mark 8 – 9 is given for full assimilation of the program material and the ability to navigate in it, conscious application of knowledge to solving the problem of heuristics, if meeting all the requirements for evaluation "10 points" with some minor mistakes made (i.e. the approach to solving the problems is proper, but there were inaccuracies in the calculation of certain parameters), or not quite complete conclusions drawn. The design of the completed task should be neat.

Mark 6 – 7 is given for the ability to apply the theoretical knowledge to solving the problem of heuristics, if the majority of the tasks were performed, and the students response demonstrated understanding of the conceptual material of the discipline.

Mark 4 – 5 is given for assimilation of a large piece of the material but performing the heuristic problem without sufficient understanding of the uses of the educational material and inability to correctly perform all the tasks.

Mark 2 – 3 is given for a partial ability to apply the theoretical knowledge to solving practical problems, with the failure to assimilate a large piece of the material, inability correctly perform the task, facing many difficulties in the analysis of economic phenomena and processes.

Mark 0 – 1 is given for the failure to do the task in general.

The minimum needed score for the exam is 25.

10. The distribution of students' points

The system of evaluation of the level of students' professional competences is given in Table 12.

Table 12

The system of evaluation of the level of students' professional competences

Week	Hours		Form of studying		Assessment	
					Form of control	Maximal point
1	2		3		4	5
Content module 1. The theoretical foundations of innovation management						
1	in class	2	Lecture	Theme 1. The essence, development and basic concepts of the innovation process	Work at the lecture	0.5
		2	Practice	Top-50 innovations of the last decade	Active participation in the practice	0.5
	ind.	4	Preparation for lessons	Search, selection and study of the literature for the theme	Check of the home task	–
2	in class	2	Practice	A workshop "The innovation theory development"	Presentation	3
					Active participation in the practice	0.5
	ind.	3	Preparation for lessons	Search, selection and study of the literature for the theme	Check of the home task	–
				Preparation for the workshop, development of a presentation		

Table 12 (continuation)

1	2		3		4	5
3	in class	2	Lecture	Theme 2. Innovative activity as an object of innovation management	Work at the lecture	0.5
		2	Practice	Performance of the exercise "Using the 4Ps approach to explore the innovation space"	Active participation in the practice	0.5
					Check of the task on the theme	5
	ind.	4	Preparation for lessons	Search, selection and study of the literature for the theme	Check of the home task	-
4	in class	2	Practice	Performance of practical tasks of defining innovative models and justification of the choice	Active participation in the practice	0.5
	ind.	3	Preparation for lessons	Search, selection and study of the literature for the theme		-
				Performance of calculations according to the theme		
5	in class	2	Lecture	Theme 3. Government support for innovation activity	Work at the lecture	0.5
					Test 1	5
		2	Practice	Performance of calculations according to the theme	Active participation in the practice	0.5
	ind.	4	Preparation for lessons	Search, selection and study of the literature for the theme	Check of the home task	-
				Performance of calculations according to the topic		
6	in class	2	Practice	Performance of calculations according to the cost of innovations development	Active participation in the practice	0.5
	ind.	3	Preparation for lessons	Search, selection and study of the literature for the theme	Check of the home task	-
7	in class	2	Lecture	Theme 4. Organizational forms of innovation activity	Work at the lecture	0.5
		2	Practice	Performance of situational tasks with choosing the forms of innovation activity organization	Active participation in the practice	0.5
	ind.	4	Preparation for lessons	Search, selection and study of the literature for the theme	Check of the home task	-

Table 12 (continuation)

1	2		3		4	5
8	in class	2	Practice	Performance of situational tasks concerning the formation of the portfolio of innovation at an enterprise	Active participation in the practice	0.5
					Check of the task by theme	5
	ind.	3	Preparation for lessons	Search, selection and study of the literature for the theme	Check of the home task	–
				Preparation of the task		
Content module 2. Innovative activity management						
9	in class	2	Lecture	Theme 5. Management of innovation development of an organization	Work at the lecture	0.5
		2	Practice	Performance of calculations according to the theme	Active participation in the practice	0.5
	ind.	4	Preparation for lessons	Search, selection and study of the literature for the theme	Check of the home task	–
10	in class	2	Practice	Performance of calculations concerning the structure of innovation costs	Active participation in the practice	0.5
	ind.	3	Preparation for lessons	Search, selection and study of the literature for the theme	Check of the home task	–
11	in class	2	Lecture	Theme 6. Management of innovation projects	Work at the lecture	0.5
					Test 2	5
	in class	2	Practice	Performance of calculations according to the theme	Active participation in the practice	0.5
					ind.	4
Performance of calculations according to the topic						
12	in class	2	Practice	Performance of practical tasks concerning the justification of the innovation project	Check of the task by theme	5
					Active participation in the practice	0.5
	ind.	3	Preparation for lessons	Search, selection and study of the literature for the theme	Check of the home task	–

Table 12 (the end)

1	2		3		4	5
13, 14	in class	2	Lecture	Theme 7. Risk management in innovative activity	Work at the lecture	0.5
		2	Practice	Performance of calculations according to the theme	Active participation in the practice	0.5
	ind.	7	Preparation for lessons	Search, selection and study of the literature for the theme	Check of the home task	–
				Performance of calculations		
15, 16	in class	2	Lecture	Theme 8. Evaluating the effectiveness of innovation activity	Work at the lecture	0.5
					Test 3	5
	ind.	7	Preparation for lessons	Search, selection and study of the literature for the theme	Check of the home task	–
17	in class	2	Lecture	Theme 8. Evaluating the effectiveness of innovation activity	Work at the lecture	0.5
					Final test	10
	ind.	4	Preparation for lessons	Search, selection and study of the literature for the theme	Check of the home task	–
				Performance of the essay	Check of the essay	6
				Preparation for the final test		–
Session	in class	0	Pre-examination consultation	Solving practical problems	Final control	40
			Exam	Solving the exam card problems		
	ind.	4	Preparation for the exam	Reviewing the modules material		
Total hours		108	Maximal points			100

The maximal number of points which a student can get during a week after the forms and methods of studying is given in Table 13.

Table 13

Distribution of points by weeks

Weeks	Lectures	Practicals	Test	Practical tasks by the themes	Essay	Presentation	Total
1	2	3	4	5	6	7	8
Week 1	0.5	0.5					1
Week 2		0.5				3	3.5
Week 3	0.5	0.5		5			6
Week 4		0.5					0.5
Week 5	0.5	0.5	5				6
Week 6		0.5					0.5
Week 7	0.5	0.5					1
Week 8		0.5		5			5.5
Week 9	0.5	0.5					1
Week 10		0.5					0.5
Week 11	0.5	0.5	5				6
Week 12		0.5		5			5.5
Week 13	0.5	0.5					1
Week 14							0
Week 15	0.5		5				5.5
Week 16							0
Week 17	0.5		10		6		16.5
Examination							40
Total	4.5	6.5	25	15	6	3	100

The final mark for the academic discipline "Management of Innovations" is calculated on the 100-point scale according to the qualification requirements for students of training direction "Management" (Table 14). For the discipline to be credited, the minimal number of the obtained points is 60 (35 points for current control, and 25 points for final control (examination)).

Table 14

The evaluation scale

The total score on a 100-point scale	The ECTS assessment scale	Assessment on the national scale
90 – 100	A	excellent
82 – 89	B	good
74 – 81	C	
64 – 73	D	satisfactory
60 – 63	E	
35 – 59	FX	unsatisfactory
1 – 34	F	

10. Recommended reading

10.1. Main

1. Балабанов И. Т. Инновационный менеджмент : учебное пособие для вузов. / И. Т. Балабанов. – СПб. : Питер, 2001. – 303 с.
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10.2. Additional

12. Попович О. С. Про деякі особливості розвитку і практичної реалізації законодавства, що регулює науково-технологічну й інноваційну сферу / О. С. Попович // Юридична Україна : Щомісячний правовий часопис. – 2004. – № 7. – С. 77–84.

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Appendices

Appendix A

Table A. 1

The structure of constituents of professional competences on the academic discipline "Management of Innovations" in accordance to the National Qualifications Framework of Ukraine

Components of the competence, which is formed by the theme	Minimal experience	Knowledge	Skills	Communications	Autonomy and responsibility
1	2	3	4	5	6
Theme 1. The essence, development and basic concepts of the innovation process					
Understanding the functioning of an economic organization to gather information for decision-making in terms of innovation	The essence of the concepts "innovation", "innovation process", classification of innovations	Knowledge of the types of innovation, principles of innovation activity	Identifying the stages of the innovation process.	Presentation of the different innovation theories	Responsibility for clear identification of the innovation theories
Theme 2. Innovative activity as an object of Innovation Management					
Exploring the innovative space and opportunities for innovation at an enterprise	The concept of innovation activity, its types and constituents	Knowledge of the characteristics of the innovation infrastructure	Identifying the strengths and weaknesses of the innovation space of an enterprise. Applying the "4P" approach	Forming the communication strategy as to the innovation space of a company.	Responsibility for decision-making on structuring the innovation space

Table A.1

1	2	3	4	5	6
Theme 3. Government support for innovation activity					
Determining the cost of developing the innovation	The state as the main subject of innovation. Methods for state support for innovation	Knowledge of the methods of state support for innovation.	Identifying the expected cumulative effect. Assessing the cost of innovation development	Presentation of the result of calculations	Making effective independent management decisions and taking responsibility for the correctness and adequacy of the results
Theme 4. Organizational forms of innovation activity					
Organizing innovation activity of a company. Using the methods of portfolio management	Types of research, design and innovation organizations	Knowledge of the forms of innovation activity. Knowledge of the key issues of portfolio management	Forming a portfolio of innovation in a company. Justifying the structure of the portfolio	Presentation of the portfolio	Making effective management decisions and taking responsibility for the correctness and adequacy of the portfolio structure
Theme 5. Management of innovation development of an organization					
Developing and justifying the innovation strategy	The meaning the term "innovation strategy", types of the innovation strategy	Knowledge of the types of innovation strategy, steps of innovation strategy development	Evaluation of an innovative environment, the state of innovation, scientific and technological potential, analysis of the parameters of the external and internal environment, resource analysis and investment opportunities, evaluation of technologies and manufacturing processes for their ability to implement innovations	Forming the communication strategy for justification of the innovation strategy of a company	Making effective independent management decisions on development of the innovation strategy. Responsibility for the correctness and adequacy of the conducted analysis and the developed strategy

Table A.1

1	2	3	4	5	6
Theme 6. Management of innovation projects					
Evaluating and implementation of an innovative project	An innovation project: the concept, the main stages of development and implementation	Knowledge of the methods of assessment of the innovation project. Knowledge of the steps of the innovation project development	Definition of the indicators that characterize the effectiveness and feasibility of an innovation project	Presentation of the result of calculations	Making decisions under uncertainty and taking responsibility for the correctness and adequacy of results of the analysis
Theme 7. Risk management in innovative activity					
Assessing the risks of innovation activities	The definition of the term "risk", types of risks	Knowledge of the methods of risk assessment and risk management	Choosing the methods of the risk assessment	Presentation of the essay "Opportunities of the minimization of risk of innovation activities"	Making management decisions concerning the risk management
Theme 8. Evaluating the effectiveness of innovation activity					
Evaluation of the effectiveness of innovation	The effectiveness of innovation	Knowledge of the evaluation procedure of innovation activity, methods for evaluating innovation projects	Choosing the methods and indicators of the assessment of the innovation activity effectiveness	Presentation of the result of the assessment of effectiveness	Responsibility for the accuracy and correctness of the results

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