



FUNCTIONAL AND COST ANALYSIS

Working program of the academic discipline (Syllabus) (3017)

Details of the academic discipline

| | |
|---|---|
| Level of higher education | <i>First (undergraduate)</i> |
| Branch of knowledge | <i>051 Economy¹</i> |
| Specialty | <i>International Economics</i> |
| Educational program | <i>International Economics</i> |
| Discipline status | <i>Normative</i> |
| Form of education | <i>daytime</i> |
| Year of training, semester | <i>4th year, spring semester</i> |
| Scope of the discipline | <i>3.5 credits</i> |
| Semester control/ control measures | <i>test</i> |
| Lessons schedule | <i>According to the schedule: http://roz.kpi.ua</i> |
| Language of teaching | <i>Ukrainian</i> |
| Information about the head of the course / teachers | <p>Lecturer: <i>Oksana Onufriivna Okhrimenko</i> <i>Professor, Professor of the Department of International Economics, Doctor of Economic Sciences, Professor</i> Contacts: <i>office (website): https://ied.kpi.ua/en/main-en</i> <i>e- mail : o.okhrimenko@kpi.ua</i> <i>Telegram : @Kassandra1212</i></p> <p>Practical classes : <i>Oksana Onufriivna Okhrimenko</i> <i>Professor, Professor of the Department of International Economics, Doctor of Economic Sciences, Professor</i> Contacts: <i>office (website): https://ied.kpi.ua/en/main-en</i> <i>e- mail : o.okhrimenko@kpi.ua</i> <i>Telegram : @Kassandra1212</i></p> |
| Placement of the course | <i>https://classroom.google.com/c/MTU5OTc2MDE1NDc0?cjc=2ovuatj</i> |

Program of educational discipline

1. Description of the educational discipline, its purpose, subject of study and learning outcomes

Functional-cost analysis, as a method of systematic research of object functions (product, process, structure), is designed to minimize costs in the areas of design, production and operation of the object while preserving its quality and utility. This methodical approach creates conditions for optimizing cost, consumer value, and other characteristics of products, services, and consumers based on

¹ In fields Field of knowledge/Specialty/Educational program:

For the disciplines of professional and practical training, information is noted in accordance with the curriculum.

For social and humanitarian disciplines, a list of branches, specialties, or "for all" is indicated .

functions and resources involved in production, marketing, sales, supply, technical support, service provision, customer service, and quality assurance .

The goal of the discipline is to acquire theoretical knowledge on functional-cost analysis of various objects, tools, methods of analysis in the context of various cost accounting systems.

The subject of the discipline is the mastering of theoretical foundations and methodical approaches for carrying out a functional-cost analysis of various objects .

Program competences , on the formation of which the discipline is oriented:

ZK 19 - Ability to calculate general indicators of the financial state of the enterprise and perform their economic interpretation; the ability to master the methodological foundations of functional-cost analysis; the ability to use FVA in solving management problems.

FC 4 - Ability to explain economic and social processes and phenomena on the basis of theoretical models, analyze and meaningfully interpret the obtained results.

FC 10 - Ability to use modern sources of economic, social, managerial, accounting information for drafting official documents and analytical reports.

FC 13 - Ability to conduct an economic analysis of the functioning and development of economic entities, assessment of their competitiveness.

FC 14 - Ability to deeply analyze problems and phenomena in one or more professional areas, taking into account economic risks and possible socio-economic consequences.

Program learning outcomes aimed at assimilation of theoretical knowledge, development of skills and mastery of decision-making skills complex specialized tasks and practical problems of the economic sphere by specialists in the international economy .

PRN 23 - To show the skills of independent work, to demonstrate critical, creative, self-critical thinking.

PRN 25 - Determine the influence of factors and analyze changes in the country's international currency policy; to organize the functional support of foreign trade agreements involving the necessary currency transactions.

PRN 27 - To form the mission and strategic goals of the enterprise.

PRN 28 - Develop control systems for the strategic activities of the enterprise.

PRN 29 - Identify and understand cause-and-effect relationships between economic phenomena and processes in the professional field, identify and evaluate influencing factors.

PRN 30 - Determine performance indicators of export and import operations.

2. Pre-requisites and post-requisites of the discipline (place in the structural and logical scheme of training according to the relevant educational program)

Prerequisites . The educational discipline "Economic analysis of international business: functional and cost analysis" is taught after studying the courses "Economics of the enterprise", "Management", "Marketing", "Economics of labor and social and labor relations", "International economy". **Post-requisites** : "Finance of enterprises".

3. Content of the academic discipline

Topic 1. Concept of functional and cost analysis

Topic 2. Functional approach to production systems

Topic 3. Organization of the FVA system

Topic 4. Cost accounting in the FVA system

Topic 5. Cost structure in the FVA system

Topic 6. Cost management

Topic 7. Application of non-financial indicators in FVA

Topic 8. Differentiated management of business processes at the enterprise

Topic 9. Reengineering of business processes based on FVA

4. Educational materials and resources

Basic literature:

1. Okhrimenko O.O. *Functional-cost analysis. Tutorial. Kyiv, "Education of Ukraine", 2013, 208 p. 5 copies in the university library.*

2. *Set of presentations* <https://classroom.google.com/c/MTU50Tc2MDE1NDc0?cjc=2ovuatj>

Additional literature:

1. Viola N., Corpino S., Fioriti M., Stesina F. *Functional Analysis in Systems Engineering: Methodology and Applications, Systems Engineering - Practice and Theory*, Prof. Boris Cogan (Ed.), ISBN: 978-953-51-0322-6, InTech, Available from: <http://www.intechopen.com/books/systemsengineering-practice-and-theory/functional-analysis-in-systems-engineering-methodology-and-applications>
2. Yoshikawa T., Innesb J., Mitchell F. *Applying functional cost analysis in a manufacturing environment. Production Economics* 36 (2020) 53-64
3. Miles, L.D. *Techniques of value analysis and engineering*. In Miles Value Foundation, 3rd ed.; CRC Press: Boca Raton, FL, USA, 2015; Available online: <https://www.amazon.com/Techniques-Value-AnalysisEngineering-3rd-ebook/dp/B00UIDZRRO> (accessed on 16 April 2018)
4. Fartookzadeh H.R., Fartookzadeh M. *Value Engineering and Function Analysis: Frameworks for Innovation in Antenna Systems. Challenges* 2018, 9, 20; doi:10.3390/challe9010020 www.mdpi.com/journal/challenges
5. Mouritsen, Jan & Hansen, Allan & Hansen, Carsten. (2001). *Inter-organizational Controls and Organizational Competencies: Episodes Around Target Cost Management/Functional Analysis and Open Book Accounting. Management Accounting Research.* 12. 221-244. 10.1006/mare.2001.0160.
6. Morey T. *Business Value of Design.* <https://www.frog.co/designmind/understanding-the-business-value-of-design-speed-to-market>
7. Lalevée A., Troussier N., Blanco E., Chakroun M., *Function analysis: going forward in value analysis, Procedia CIRP, Volume 100, 2021, Pages 655-659, https://doi.org/10.1016/j.procir.2021.05.139.*

Educational content

5. Methods of mastering an educational discipline (educational component)

Teaching methods, forms and assessment methods

Methods of training organization: group, classroom (on the online platform), outside the classroom (individual consultations), lectures, seminar classes, independent work, team work.

General teaching methods: a) explanatory and illustrative : lecture , explanation, work with information sources; b) productive (application of knowledge in practice , activity according to an algorithm , etc.); c) problematic teaching of educational material ; d) research method (cognitive tasks are set and written by students independently).

Special teaching methods: educational debates and discussions, preparation of analytical reports

Elements and techniques:

- verbal: story, explanation, conversation, lecture;
- visual: illustration, demonstration, independent information search;
- practical: research, interpretation of results.

Forms and methods of evaluation: observation of students' educational activities, oral survey, written control, test control, rating system of evaluation, calendar control, certification.

Semester control - credit.

Correspondence of program results, methods, elements and methods of training, assessment forms

| PRN | Teaching methods | Assessment forms and methods |
|--------|--|--|
| 1 | 2 | 3 |
| PRN 23 | <p>Methods of training organization: independent work, team work</p> <p>General teaching methods : work with information sources, activity according to the algorithm , research task;</p> <p>Special teaching methods : preparation of analytical reports</p> <p>Elements and methods : independent search for information, explanation, demonstration (tables, graphs, diagrams, etc.),</p> | <p>The rating system of evaluation, which provides for the accumulation of points for: a part in discussions and additions at seminars , MKR.</p> <p>Calendar control: first and second certification.</p> <p>Final control - credit</p> |
| PRN 25 | <p>Methods of training organization: classroom, outside the classroom, lectures, seminar classes, independent and team work;</p> <p>General teaching methods : a) explanatory and illustrative : b) productive ; c) problematic teaching of educational material ;</p> <p>Special teaching methods : educational debates and discussions ;</p> <p>Elements and methods : verbal, visual.</p> | <p>The rating system of evaluation, which provides for the accumulation of points for: a part in discussions and additions at seminars , MKR.</p> <p>Calendar control: first and second certification.</p> <p>Final control - credit</p> |
| PRN 27 | <p>Methods of training organization: independent work, team work</p> <p>General teaching methods : work with information sources, activity according to the algorithm , research task;</p> <p>Special training methods : goal setting, development of strategic profiles</p> <p>Elements and methods : independent search for information, explanations, formulation of ideas (goals), demonstration (tables, graphs, schemes, etc.),</p> | <p>The rating system of evaluation, which provides for the accumulation of points for: a part in discussions and additions at seminars , MKR.</p> <p>Calendar control: first and second certification.</p> <p>Final control - credit</p> |
| PRN 28 | <p>Methods of training organization: independent work, team work</p> <p>General teaching methods : work with information sources, activity according to the algorithm , research task;</p> <p>Special teaching methods: visualization of practical tasks (Maps, schemes, tables, graphs, diagrams).</p> <p>Elements and methods : independent search for information, explanations, formulation of ideas (goals), demonstration (tables, graphs, schemes, etc.),</p> | <p>The rating system of evaluation, which provides for the accumulation of points for: a part in discussions and additions at seminars , MKR.</p> <p>Calendar control: first and second certification.</p> <p>Final control - credit</p> |
| PRN 29 | <p>Methods of training organization: independent work, team work</p> | <p>The rating system of evaluation, which provides for the accumulation of points for: a part in</p> |

| | | |
|--------|--|--|
| | <p>General teaching methods : work with information sources, activity according to the algorithm , research task;</p> <p>Special teaching methods : calculations, analysis of results, preparation of analytical reports</p> <p>Elements and methods : independent search for information, explanation, demonstration (tables, graphs, diagrams, etc.),</p> | <p>discussions and additions at seminars , MKR.</p> <p>Calendar control: first and second certification.</p> <p>Final control - credit</p> |
| PRN 30 | <p>Methods of training organization: independent work, team work</p> <p>General teaching methods : work with information sources, activity according to the algorithm , research task;</p> <p>Special teaching methods : calculations, analysis of results, preparation of analytical reports</p> <p>Elements and methods : independent search for information, explanation, demonstration (tables, graphs, diagrams, etc.),</p> | <p>The rating system of evaluation, which provides for the accumulation of points for: a part in discussions and additions at seminars , MKR.</p> <p>Calendar control: first and second certification.</p> <p>Final control - credit</p> |

Note: PRN is a program learning outcome

Topics and structural and logical structure of the course

| You - training day | Distri butio n of hours | | | Names sections, topics | The content of classes and independent work of applicants | Control activities | PRN , ZK, SK |
|--------------------|-------------------------|---|-----|--|---|--------------------|--------------|
| | L | P | S R | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1-2 | 2 | 4 | 3 | Topic 1. Concept of functional cost analysis | <p>L 1. Concept of functional and cost analysis</p> <p>The essence and main provisions of the FVA . The difference between FVA and traditional cost accounting methods . The history of the emergence of FVA . Evolution of FVA .</p> <p>Educational materials: 1,2.</p> <hr/> <p>P1. Methods of technical creativity</p> <p>Educational tasks : Heuristic methods (random search strategy); Methods of functional and structural research of objects; Combined algorithmic methods (logic search strategy).</p> <p>Auxiliary materials: 3</p> <p>IW. Application of the SCAMPER method when considering the case of improving McDonald's operations.</p> | poll | ZK19 FC 4 |

| | | | | | | | |
|------|---|---|---|---|--|------|--|
| | | | | | <p>P2. Concept of functional and cost analysis. Educational tasks : C utnity and the basis of the provisions of the FVA. The difference between FVA and traditional cost accounting methods. The history of FVA. Evolution of FVA. Auxiliary materials: 5.7 SR. Evolution of cost management systems. Characteristic features of cost accounting systems of different levels. Criteria for the implementation of FVA. Post-operative and traditional approaches to cost calculation. Forms and objects of FVA. The concept of value in the context of functional-value analysis.</p> | | |
| 3-4 | 2 | 4 | 3 | <p>Topic 2. Functional approach to production systems</p> | <p>L1. Functional approach to production systems . The concept of function and consumer value in FVA . Classification of functions and rules for their formulation Approaches and principles in conducting FVA . Educational materials: 1,2</p> | poll | ZK19 FC 4 |
| | | | | | <p>P 1. Functional approach to production systems . Educational tasks : The concept of function and consumer value in FVA. Classification of functions and rules for their formulation. Approaches and principles in conducting FVA. Auxiliary materials: 4 CP. Contradictions between functional departments and organizational processes.</p> | | |
| | | | | | <p>P 2. Application of FVA in personnel management Educational tasks : Stages of conducting FVA in management. Optimization of the functions of the personnel training department. Reorganization of the functional structure of the department Auxiliary materials: 3, 6 IW. Audit of the organization's business processes through employee functions</p> | | |
| 5 -6 | 2 | 4 | 3 | <p>Topic 3. FVA organization</p> | <p>L1. FVA organization The value of functional-cost analysis for the economic activity of the enterprise. FVA objects. The main stages of functional and cost analysis. Forms and procedures of functional cost analysis. Educational materials: 1,2</p> | poll | ZK19 FC10 FC13 FC14 PRN 23 PRN 29 |

| | | | | | | | |
|-----|---|---|---|--|---|--|---------------------------|
| | | | | | <p>P1. FVA organization . Educational tasks : The value of functional and cost analysis in marketing activities. FVA objects. The main stages of FVA. Forms and procedures of FVA. Auxiliary materials: 5 CP. The theory of solving inventive problems and its application in the functional-value analysis system. The content of works at the main stages of the functional and cost analysis</p> <p>P2. Application of FVA in solving management problems Educational tasks : Formulation of functions. Formulation of a list of control questions. Definition of functions of structural divisions. Determining the costs of functions. Auxiliary materials: 11, 12 SR. Methodical aspects of functional and cost analysis of management subsystems.</p> | | |
| 7-8 | 2 | 4 | 3 | <p>Topic 4. Cost accounting in the FVA system.</p> | <p>L1. Cost accounting in the FVA system. The role of costs in production efficiency. Methods of cost accounting and costing of products, works, and services. Evolution of cost management systems. Educational materials: 1, 2</p> <p>P1. Cost accounting in the FVA system Educational tasks : The role of costs in production efficiency. Evolution of cost management systems. Methods of cost accounting and costing of products, works, and services. Auxiliary materials: 5, 6 CP. Construction of a functional-cost diagram, its essence and purpose</p> <p>P2. Process organization of the company's activities when entering foreign markets Educational tasks : Discussion of the case "Transition to a process organization". Building a tree of enterprise goals. Transformation of business processes in the context of the target installation. Auxiliary materials: 4 SR. Construction of a functional and cost model of the company</p> | | ZK19 FC10 PRN 30 |
| 7 | | 1 | 2 | <p>Topic 1- 4.</p> | <p>Modular control work, part 1 (MKR)</p> | <p>Assessment of PRN according to the Test</p> | |

| | | | | | | | |
|---|---|---|---|--|--|--|---|
| 9-10 | 2 | 4 | 3 | Topic 5. calculation and pricing in the FVA system. | L1. Calculation of costs and pricing in the FVA system. Types of costs for functions. Classification of costs in management accounting. Costing. Pricing methods. Educational materials: 1, 2 | | ZK19 FC10 FC13 FC14 PRN 29 |
| | | | | П1. Calculation of costs and pricing in the FVA system. Educational tasks : Formation of expenses by places and centers of responsibility. Concept of centers of responsibility. Formation of centers of responsibility . Auxiliary materials: 4, 6 CP. Methods and methods of calculating the cost of production | | | |
| | | | | П2. Organization of production processes in the FVA system . Educational tasks : Determining the boundaries of the research object. Definition of objectively necessary functions. Determination of actually implemented functions of the control system. Determination of the significance of the functions of the control system from the point of view of the implementation of the goals of the production unit. Analysis of disparity zones between the importance of functions and consumed resources. Development of measures to eliminate identified disparities. Auxiliary materials: 3, 5 SR. Functional-cost and system analysis as the main components of the methodology for analyzing the operation of the logistics system of the enterprise | | | |
| 11- 12 | 2 | 4 | 3 | Topic 6. Cost manageme nt | L1. Cost management . Calculation of costs by places of occurrence. Classification of places of occurrence of costs. The system of normative cost accounting and budget planning. Educational materials: 1, 2 | | ZK19 FC10 FC13 FC14 PRN 23 |
| P1. Cost management. Educational tasks : Limitations of the regulatory cost accounting system and flexible budget planning when determining the cost of production. Supporting materials: 3, 5, 7 IW. Methods of target formation and structural analysis of enterprise costs Concept of target cost. Stages of achieving the target cost price. | | | | | | | |

| | | | | | | | |
|-------|---|---|---|---|---|---|---|
| | | | | | <p>P2. Experience in cost management.</p> <p>Educational tasks : Components of an integrated cost accounting system. The GPK system (Grenzplancostenrechnung). Principles of GPK. Caterpillar system .</p> <p>Auxiliary materials: 7</p> <p>SR, Implementation of an integrated cost accounting system. The concept of target cost management " target costing ". The concept of continuous improvement " kaizen costing ". Joint use of " target costing " and " kaizen costing " . Method of structuring (deployment) of quality functions.</p> | | |
| 13-14 | 2 | 4 | 3 | <p>Topic 7.</p> <p>Application of non-financial indicators in the FVA</p> | <p>L1. Application of non-financial indicators in the FVA</p> <p>The role of non-financial indicators. Application of FVA in benchmarking . Features of the kaizen system . Pseudo-profit centers.</p> <p>Educational materials: 1,2</p> | | ZK19 FC10 FC13 FC14 PRN 23 PRN 27 PRN 28 |
| | | | | | <p>P1. Application of non-financial indicators in the FVA.</p> <p>Educational tasks : The role of non-financial indicators. Application of FVA in benchmarking . Features of the Kaizen system . Pseudo-profit centers.</p> <p>Auxiliary materials: 3, 6</p> <p>SR. Kaizen and Total Quality Management. The Japanese method of management .</p> | | |
| | | | | | <p>P2. Classification of costs in the process of reorganization of business systems.</p> <p>Educational tasks : Problems of cost formation and management. Scientifically based classification of costs. Cost management in the "value chain" creation system</p> <p>Auxiliary materials: 5, 6</p> <p>SR. Structural and functional model of management processes.</p> | | |
| 14 | | 1 | 2 | Topic 5-7. | Modular control work, part 2 (MKR) | Assessment of PRN according to the Test | |
| 15-16 | 2 | 4 | 3 | Topic 8. | <p>Differentiated activity management</p> <p>Concept of operational-oriented management. Production aspects of management. Product range and pricing. Customer relations. Product design and projecting.</p> <p>Educational materials: 1, 2</p> | | ZK19 FC10 FC13 FC14 PRN 23 PRN 27 |

| | | | | | | | |
|---------|----|----|----|--|--|--|-----------|
| | | | | | <p>P1. Differentiated activity management. Educational tasks : Concept of operational-oriented management. Production aspects of management. Product range and pricing. Auxiliary materials: 6 CP. Construction of a diagram of functional costs.</p> <p>P2. Differentiated activity management. Educational tasks : Customer relations. Design in product design. Using the ABC method in FVA Supporting materials: 4, 5, 6 SR. Implementation of cost management systems of industrial enterprises based on the ABC method</p> | | PRN 28 |
| 17-18 | 2 | 4 | 3 | <p>Topic 9. Reengineering of business processes based on FVA</p> <p>L1. Reengineering of business processes on the basis of FVA . Stages of business process reengineering. Development of the organization's business model. Development of a model of existing business processes. Functional-cost analysis of business processes. Educational materials: 1, 2</p> <p>P1. Application of FVA for calculating the cost of production. Educational tasks : Calculation of the cost price by the traditional method . Cost and profit analysis . Process approach. Business process costs. Calculation of the unit cost of production on the basis of ABC. Auxiliary materials: 6 IW. Process approach to management. Modeling of business processes.</p> <p>P2. Test</p> | | ZK19 FC10 FC13 FC14 PRN 23 PRN 27 PRN 28 PRN 30 | |
| 2-17 | 0 | 2 | 10 | Individual task | The curriculum does not provide for individual tasks | | |
| 18 | | | 6 | Test | IW: preparation for taking the test | Completing credit control work or receiving a credit according to the current rating | |
| Togther | 18 | 36 | * | | | | |

Note: L – lectures, P – practical classes, PRN - program result of study, ZK - general competences, SC - special (professional) competences.

Independent work of a student/graduate student

The curriculum provides for 51 hours of independent work. The following are assigned to independent work:

preparation for classroom classes, for the completion of the modular control work, preparation of the essay, performance of the calculation work, preparation for the completion of the semester control

Type of independent work, amount of hours to perform

| No. z/p | Amount of hours | Type of independent work |
|----------|-----------------|--|
| 1 | 2 | 3 |
| 1 | 27 | Preparation for classroom classes |
| 2 | 4 | Preparation for the implementation of modular control work |
| 3 | 10 | Performing calculation work |
| 4 | 10 | Preparation for the semester control in the form of credit |
| Together | 51 | |

Policy and control

Policy of academic discipline (educational component)

Attending classes

Attendance at lectures, practical classes, as well as absence from them, is not evaluated. However, students are encouraged to attend classes, as they teach theoretical material and develop the skills needed to complete the semester's individual assignment. The evaluation system is focused on receiving points for the student's activity, as well as the performance of tasks that can develop practical skills and abilities.

Missed control measures

The thematic task, which is submitted for review with a violation of the deadline, is evaluated taking into account penalty points.

The procedure for contesting the results of control measures

Students have the opportunity to raise any issue relating to the screening process and expect it to be dealt with in accordance with pre-defined procedures.

Students have the right to appeal the results of control measures, but must be reasoned, explaining which criterion they disagree with according to the evaluation letter and/or comments.

Calendar border control

Intermediate certification of students (hereinafter - certification) is a calendar boundary control. The purpose of the attestation is to improve the quality of students' education and monitor the implementation of the schedule of the educational process by students 2.

| Criterion | The first certification | Second certification |
|--|-------------------------|----------------------|
| Term of attestation | 8th week | 14th week |
| The condition for obtaining certifications is the current rating | ≥ 15 points | ≥ 30 points |

Academic integrity

²Rating systems for evaluating learning outcomes: Recommendations for development and application. Kyiv: KPI named after Igor Sikorskyi, 2018. 20 p.

The policy and principles of academic integrity are defined in Chapter 3 of the Code of Honor of the National Technical University of Ukraine "Ihor Sikorsky Kyiv Polytechnic Institute". More details: <https://kpi.ua/code> .

Norms of ethical behavior

Standards of ethical behavior of students and employees are defined in Chapter 2 of the Code of Honor of the National Technical University of Ukraine "Ihor Sikorskyi Kyiv Polytechnic Institute". More details: <https://kpi.ua/code> .

Inclusive education

The study discipline "International Consulting" can be taught to most students with special educational needs, except for students with severe visual impairments that do not allow them to perform tasks with the help of personal computers, laptops and/or other technical means.

Extracurricular activities

Participating in conferences, forums, round tables, etc. is expected within the scope of studying the academic discipline.

Types of control and rating system for evaluating learning outcomes (RSO)

Evaluation system

| No. z/p | Assessment control measure | % | Weight score | Ring _ | In total |
|---------|--|----|--------------|--------|----------|
| 1. | Participation in discussions and additions at seminars | 15 | 3 | 5 | 15 |
| 2. | Performance of practical tasks | 25 | 5 | 5 | 25 |
| 3. | Modular control work | 10 | 5 | 2 | 10 |
| 4 | Calculation and graphic work | 10 | 10 | 1 | 10 |
| 5. | Test | 40 | 40 | 1 | 40 |
| | In total | | | | 100 |

Semester certification of students

| Mandatory condition for admission to credit | | Criterion |
|---|--|-----------------------|
| 1 | Presentation of RGR | $6 \leq RD \leq 10$ |
| 2 | Participation in discussions and additions at seminars | $9 \leq RD \leq 15$ |
| | Performance of practical tasks | $10 \leq RD \leq 25$ |
| 3 | MKR | $6 \leq RD \leq 10$ |
| 4 | Test | $30 \leq RD \leq 40$ |
| | In total | $60 \leq RD \leq 100$ |

Table of conversion of rating points to grades on the university scale³

| Rating points, RD | Score for university scale |
|---|----------------------------|
| 95 ≤ RD ≤ 100 | Perfectly |
| 85 ≤ RD ≤ 94 | Very good |
| 75 ≤ RD ≤ 84 | Fine |
| 65 ≤ RD ≤ 74 | Satisfactorily |
| 60 ≤ RD ≤ 64 | Enough |
| RD < 60 | Unsatisfactorily |
| Non-fulfillment of admission conditions | Not allowed |

Additional information on the discipline (educational component) the list of questions submitted for semester control (Appendix 2); certificates of completion of remote or online courses on the relevant subject may be credited upon prior agreement with the teacher;

Appendix 1. Modular control work

Explain the role of functional cost analysis as a means of increasing production efficiency.

For what purposes is operation-oriented management used?

Test task

What is the main function of a cost accounting system?

- a) assessment of commodity stocks and measurement of the cost of goods for the purpose of preparing financial statements;
- b) determining the level of qualification of workers;
- c) detection of provision of necessary production resources.

The GPK approach was developed in:

- a) Germany;
- b) USA;
- c) Japan.

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Appendix 2. Questions for credit

1. The essence and main provisions of the FVA
2. Difference of FVA from traditional cost accounting methods
3. History of the emergence of FVA
4. Evolution of FVA
5. Concept of function and consumer value in FVA
6. Classification of functions and rules for their formulation
7. Approaches and principles in conducting FVA
8. The value of functional and cost analysis for the economic activity of the enterprise
9. FVA objects
10. The main stages of functional and cost analysis
11. Forms and procedures of functional and cost analysis

³Evaluation of learning results is carried out according to the rating system of evaluation in accordance with the recommendations of the Methodological Council of KPI named after Igor Sikorskyi, approved by protocol No. 7 dated March 29, 2018.

12. The role of costs in production efficiency
13. Methods of cost accounting and costing of products, works, and services
14. Evolution of cost management systems
15. Types of expenses for functions
16. Classification of costs in management accounting
17. Calculation of costs
18. Pricing methods
19. Calculation of expenses by places of occurrence
20. Classification of places of occurrence of costs
21. System of normative cost accounting and budget planning
22. Limitations of the regulatory accounting system and flexible budget planning when determining the cost of production
23. The role of non-financial indicators
24. Application of FVA in benchmarking
25. Features of the kaizen system
26. Pseudo-profit centers
27. Concept of operational-oriented management
28. Production aspects of management
29. Product assortment and price formation
30. Customer relations
31. Product design and projecting

Appendix 3. Calculation and graphic work

Application of FVA in solving management problems

- 1) The enterprise will produce several names of goods. There is appropriate equipment and production space;
- 2) The program goal of the firm is to become a leading firm capable of achieving a leading position among competing enterprises on the foreign market

Based on the program goal, formulate the main internal goals of this company.

1. _____
2. _____

In accordance with the main goals, formulate the main functions of the management system based on control questions (Table 1):

Table 1

| Question | Content |
|----------|--|
| What? | What is being done? Does it need to be done? Why is this being done? When could it not be done? |
| Where? | Where is it held? Is this venue the best? Can it be done just as well or better elsewhere? |
| | |

Define functions and performers (Table 2).

Table 2

| Function | Performers | | | | |
|----------|------------|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| F1. | | | | | |
| F2. | | | | | |
| F3. | | | | | |

Determine the functions of structural divisions (Table 3).

Table 3. Functions of structural subdivisions

| Function index | Function name | Executor of the function |
|----------------------|---------------|--------------------------|
| F1. F1.1. F1.2 | | |
| F2. F2.1. F2.2 | | |

Determine the main functions of the subdivision (Table 4).

Table 4. Functions of the unit

| Performed functions | Head) | Specialist | | Engineer |
|---------------------|-------|------------|--|----------|
| | | | | |
| | | | | |
| | | | | |

Note: O — basic functions; D are secondary functions.

Determine the costs of performing the functions (Table 5).

Table 5

| Cost centers | In total | | Material costs | | Salary | | Deductio ns | | Depreciation of fixed assets | | Other expenses | |
|-------------------|----------|---|----------------|---|--------|---|-------------|---|------------------------------|---|----------------|---|
| | euro | % | euro | % | euro | % | euro | % | euro | % | euro | % |
| Operational units | | | | | | | | | | | | |
| In total | | | | | | | | | | | | |

Working program of the academic discipline (syllabus):

Compiled by Professor, Doctor of Economics . Oksana Okhrimenko

Approved by the Department of International Economics (protocol No. 12 dated 06.14.2023)

Agreed by the Methodical Commission of the faculty (protocol No. 11 dated 06.30.2023)