



ECONOMICS AND PRODUCTION ORGANIZATION

Work program of the academic discipline (Syllabus)

Course details

Level of higher education	First (bachelor's)
Field of knowledge	17 Electronics, Automation, and Electronic Communications
Specialization	172 Electronic Communications and Radio Engineering
Educational program	For all educational programs
Status of discipline	Compulsory
Form of study	Full-time (daytime)
Year of study, semester	4th year, fall semester
Scope of the discipline	4 credits/120 hours (lectures: 36 hours, practical lessons: 36 hours, independent work: 48 hours)
Semester control/assessment	Test, Module test
lesson schedule	According to the schedule: https://schedule.kpi.ua 1 lecture (2 hours) once a week; 1 practical lesson (2 hours) once a week.
Language of instruction	Ukrainian
Information about the course leader/teachers	Lecturer: Marina Duchenko Associate Professor of the Department of Economic Cybernetics, Candidate of Economic Sciences, Associate Professor, office (website): https://ecocyber.fmm.kpi.ua/uk/ e-mail duchenko.maryna@iill.kpi.ua Practical lessons: Marina Mikhailovna Duchenko Associate Professor of the Department of Economic Cybernetics, Candidate of Economic Sciences, Associate Professor, office (website): https://ecocyber.fmm.kpi.ua/uk/ e-mail: duchenko.maryna@iill.kpi.ua
Course placement	Sikorsky Distance Learning Platform: https://lessonroom.google.com/c/NzEwMzgyMDY3MDg3AS "Electronic Campus" https://campus.kpi.ua Electronic archive of scientific and educational materials of Igor Sikorsky KPI (ELAKPI): https://ela.kpi.ua

The course "Economics and Organization of Production" provides future specialists with the opportunity to study general and specific approaches to organizing effective production, ways and methods of achieving the best results for an enterprise, taking into account limited resources, time, and the variability of economic decisions regarding cost

optimization.

The purpose of the discipline is to develop systematic knowledge, abilities, and skills for acquiring professional competencies in the field of entrepreneurial activity, the effective use of limited production resources, and the organization and management of economic processes for the development and implementation of optimal solutions.

The subject of the discipline is a system of principles, scientific approaches, and patterns of economic relations that arise during the use of the resource potential of an enterprise in the process of organizing the production of goods and services in order to optimize costs and increase the variability of economic decisions.

Program competencies that the discipline is focused on developing:

SS02 - Ability to apply knowledge in practical situations
ZK03 - Ability to plan and manage time

SS08 - Ability to identify, set, and solve problems

SS13 - Ability to make decisions and act in accordance with the principle of zero tolerance for corruption and any other manifestations of dishonesty

HS09 - Ability to accept and master new equipment in accordance with applicable standards.

HS14 - Willingness to study scientific and technical information, domestic and foreign experience on the subject of investment (or other) projects in telecommunications and radio engineering.

The program's learning outcomes are aimed at acquiring theoretical knowledge, developing skills, and mastering the ability to solve problems and practical issues in the economic sphere of enterprise activity:

PRO 11 - Apply interpersonal skills to interact with other people and engage them in teamwork.

Soft skills: ability to work with information, analytical vision, logical thinking.

1. Prerequisites and post-requisites for the discipline

Prerequisites: Prerequisites to studying the discipline are the educational components "Business law."

Post-requisites: Discipline provides the following educational components: "Diploma Design"

2. Contents of the academic discipline

List of topics of the academic discipline:

SECTION I. Economic foundations of the production and economic activities of an enterprise.

Topic 1. The enterprise as a business entity. The economic mechanism of enterprise activity. SECTION II. Resource provision for the enterprise.

Topic 2. Fixed and current assets of an enterprise.

Topic 3. Personnel and labor productivity. Organization of remuneration at the enterprise.

SECTION III. Economic results and production efficiency.

Topic 4. Production costs and product cost.

Topic 5. Prices and pricing of an enterprise in market conditions.

Topic 6. Financial and economic results of the enterprise's activities. Topic 7.

Quality and competitiveness of the enterprise's products. SECTION IV.

Fundamentals of production organization and planning.

Topic 8. Organization of main production at the enterprise.

Topic 9. Technological and organizational preparation of production.

Topic 10. Organization of auxiliary production.

Topic 11. Forecasting and planning of enterprise activities.

3. Teaching materials and resources

Basic literature

1. Enterprise Economics: Textbook: in 3 volumes / edited by A. V. Nepra, I. Yu. Shevchenko. Kharkiv: Ivanchenko I. S. Publishing House, 2024, Vol. 1, 537 p. <https://dspace.khadi.kharkov.ua/handle/123456789/20336>
2. Savchenko S.M., Kukharuk A.D., Tymoshenko N.Yu. Economics and Organization of Production: A Practical Guide for Students of Technical Specialties. Kyiv: Igor Sikorsky KPI, 2022, 93 p. URL: <https://ela.kpi.ua/handle/123456789/46962>
3. Enterprise economics: textbook: in 3 parts. Part 1 / Mazaraky, A. A., Blakita, G. V., Sytnik, G. V. et al.; edited by A. A.

Mazaraky. – Kyiv: State University of Trade and Economics, 2022 <https://doi.org/10.31617/p.knute.2022-175>

4. Business Economics: Textbook: in 3 parts. Part 2 / A. A. Mazaraky, G. V. Blakita, G. V. Sytnik, et al.; edited by A. A. Mazaraky. – Kyiv: State Trade and Economics University, 2023. – 472 p. DOI: 10.31617/p.knute.2022-176
5. Enterprise Economics: Textbook: in 3 parts. Part 3 / A. A. Mazaraky, N. M. Gulyayeva, I. V. Stoyanenko et al. edited by A. A. Mazaraky. – Kyiv: State University of Trade and Economics, 2023. – 356 p. DOI: 10.31617/p.knute.2022-177
6. Economics and Organization of Production: Distance Learning Course for Engineering Majors. Compiled by: M. M. Duchenko, I. V. Shostak. Certificate Series DK N0248 dated 07.12.2023. <https://lessonroom.google.com/c/NjlyMjkwMTY2MTA3?cic=y6qgk7l>
7. Shevchuk, O. A. Economics and production organization. Recommendations for completing the economic part of thesis work [Electronic resource]: a textbook for bachelor's degree candidates in the following educational programs: "Intelligent service-oriented distributed computing" "Computer Technologies in Biology and Medicine" "Artificial Intelligence Systems and Methods" specialty 122 Computer Science "System Analysis and Management" specialty 124 System Analysis / O. A. Shevchuk, N. V. Roshchina, M. M. Duchenko; Igor Sikorsky KPI. – Electronic text data (1 file: 611 KB). – Kyiv: Igor Sikorsky KPI, 2022. – 47 p. – Title from screen. – URL: <https://ela.kpi.ua/handle/123456789/47501>.

Additional reading

1. Enterprise Economics: Textbook / Edited by Prof. L.L. Kovalskaya, Prof. I.V. Kryvoviazuk. Kyiv: Kondor, 2020. 700 p. <https://lib.intu.edu.ua/uk/147258369/5579>
2. Enterprise Economics: Study Guide (in diagrams and tables); collective authorship; edited by P. A. Fisunencko, Doctor of Economics. Dnipro: DDUVS, 2024. 150 p. <https://er.dduvs.edu.ua/handle/123456789/12983>
3. Andrus O.I., Pokrovska N.M. Economics and Organization of Production: Textbook for practical lessons Kyiv : KPI named Igor Sikorsky, 2022, 127 <https://ela.kpi.ua/server/api/core/bitstreams/ceacd9e3-6bbe-4e2a-814c-673819edec66/content>
4. Enterprise Economics: Textbook: in 3 parts. Part 2 / A. A. Mazaraky, G. V. Blakita, G. V. Sytnik, et al.; edited by A. A. Mazaraky, A. A. A. Mazaraky. – Kyiv : State Trade and Economics University, 2023. 472 p. <https://knute.edu.ua/file/MjkwMjQ=/2cb937eb99dbcc13f20ebcd792cd3f1e.pdf>
5. Business Economics [Electronic resource]: practical guide: textbook for bachelor's degree students in the educational programs "Management and Business Administration," "International Business Management," "Logistics," specialty 073 Management / Igor Sikorsky Kyiv Polytechnic Institute; compiled by: A. V. Kvasko, O. V. Huk. – Electronic text data (1 file). – Kyiv: Igor Sikorsky KPI, 2024. – 90 p. <https://ela.kpi.ua/server/api/core/bitstreams/cfb4d94c-f6d6-4218-8a03-e586145732d6/content>
6. Kryvda O.V., Boichuk N.Ya., Rudenko O.I. Economics and Organization of Production: Textbook. Kyiv: Igor Sikorsky Kyiv Polytechnic Institute, 2020, 99 p.
7. Petrenko K.V., Skorobogatova N.E. Economics and Organization of Production: Textbook for Bachelor's Degree Candidates in Technical and Engineering Specialties. Kyiv: Igor Sikorsky Kyiv Polytechnic Institute, 2019. 177 p. URL: <https://ela.kpi.ua/handle/123456789/27463>

Information resources

8. Ministry of Economic Development and Trade of Ukraine: official: website. URL: <http://www.me.gov.ua/>
9. State Statistics Service of Ukraine: official: website. URL: www.ukrstat.gov.ua
10. Agency for Infrastructure Infrastructure Stock Market of Ukraine (ARIFRU): website URL: <https://www.smida.gov.ua/about>
11. National Institute for Strategic Studies. Official website: URL: <http://www.niss.gov.ua>
12. Regulatory acts of Ukraine. Official website: URL: www.nau.kiev.ua
13. Server of the Verkhovna Rada of Ukraine. Official website: URL: <http://www.rada.gov.ua>
14. National Bank of Ukraine. Official website: URL: <https://bank.gov.ua/>
15. Ministry of Finance of Ukraine. Official website: URL: <https://www.mof.gov.ua/uk>

Educational content

4. Methodology for mastering the academic discipline (educational component)

Teaching methods, forms and methods of assessment

Methods of organizing learning: lectures; practical lessons; independent work; consultations; work with educational and methodological literature and information resources.

General teaching methods: problem-based learning; dialogue and communication technologies; research method; reproductive method when performing modular control work, practice-oriented learning.

Special teaching methods: analytical tasks

Elements and techniques: moderation, facilitation, brainstorming, group discussion, presentations. **Distance learning method** – for interactive communication between students and teachers in synchronous (Zoom) and asynchronous (Google Workspace for Education) modes.

Forms and methods of assessment: Module test ; analytical tasks, surveys.

Semester assessment – credit.

Topics and structural-logical structure of the course

The curriculum provides for 36 hours of lectures (L) once a week and 36 hours of practical lessons (P) once a week, modular control.

Course topics and logical structure

Week of study	Distribution of hours				Names of sections, topics, description of lessons	Control measures
	L	P	Wed			
1	2	2	2	<p>Topic 1. Enterprise as a business entity. Economic mechanism of enterprise activity.</p>	<p>L1: Types of economic activity and main directions of their development. Industrial enterprise and the purpose of its activity. lessonification of enterprises. International lessonification of enterprises. Legal basis enterprise functioning. Forms of enterprise association in Ukraine. Production program, indicators for assessing enterprise output volumes.</p> <p>Characteristics of intangible enterprise resources.</p> <p>P1: Introduction. Basic requirements for studying the discipline, system of student assessment, conducting calendar and semester control. The concept of an enterprise and economy enterprise. Internal and external environment of the enterprise. Economic mechanism of enterprise activity. General methodological principles for determining production capacity and indicators its use.</p>	survey
2-3	4	4	4	<p>Topic 2. Basic and current assets of the enterprise.</p>	<p>L1; L2: Economic essence, and structure of fixed assets. Types of wear and tear and methods of calculating depreciation of fixed assets. Indicators for assessing the condition and efficiency of fixed assets. Enterprise capacity and methods for measuring it. Essence, composition, and lessonification of assets. Indicators for standardizing current assets.</p> <p>P1; P2: Economic essence, lessonification, and structure of fixed assets. Types of wear</p>	Surveys, completion of analytical tasks

					and tear and methods of calculating depreciation of fixed assets. Efficiency of use of fixed assets. Methodological basis for standardization of individual elements of working capital. Efficiency of use of working capital. Key indicators and directions for improving the efficiency of working capital use by business entities.	
4-5	4	4	4	Topic 3. Personal and labor productivity · Organization of remuneration at the enterprise.	L1; L2: Personnel policy and personnel management system. Enterprise personnel, its composition and professional and qualification structure. structure. Labor intensity of production. Principles stimulating productive labor. Content and functions of wages. Market forms and systems of remuneration. P1; P2: Content and functions of wages. Forms of remuneration. Remuneration systems. Tariff system of remuneration for workers and management personnel. Labor productivity, the procedure for its assessment, and means of improvement. Enterprise wage fund. Material incentives for personnel.	Surveys, completion of analytical tasks
6-7	4	3	2	Topic 4. Production costs and cost of production ·	L1; L2: The essence, significance, and lessonification of costs. Costs by type of economic activity. Grouping costs by economic elements. Product cost, structure, and methods of determining it. The concept of break-even point. Cost estimates for production, work, and services of an enterprise. Managing the cost of an enterprise's products in a market economy. P1; P2: Calculation of production costs enterprise. Optimization of costs at the enterprise.	Surveys, completion of analytical tasks
7		1	2		Modular control work, part 1 (MCW). Includes theoretical, test and analytical tasks.	Assessment of PRN for items 1-4
8	2	2	4	Topic 5 Prices and pricing of the enterprise in market conditions.	L1. Fundamentals of product pricing . Economic content and functions of price. The impact of product quality and demand on pricing lessonification of prices. Pricing strategies in market conditions. Types and structure of prices for industrial and scientific and technical products. Prices and tariffs for energy carriers, their features. State regulation of prices. P1. Price: definition, functions, formation process, strategies. Methods of price determination. Parametric pricing	Surveys, completion of analytical tasks

					methods. Formation and distribution of profits.	
9-10	4	4	4	Topic 6. Finance Economics	L1; L2: The essence and main tasks of the financial activities of an enterprise. Indicators for assessing the financial condition of an enterprise. Features	Surveys, performance of analytical tasks
				The results and activities of the enterprise.	Formation of enterprise profit, factors of its growth. Types of enterprise profit. Sources of formation and distribution of profit in enterprises of various forms of ownership. Indicators and factors of increasing production efficiency. P1; P2: Methodological approaches to assessing the financial condition of an enterprise and the results of its activities. Modern methods of conducting economic analysis at an enterprise.	
11	2	2	4	Topic 7 Quality and competitiveness of the company's products.	L1. The concept of and competitiveness of products. Technical level and quality of products. Stages assessing product competitiveness. Product quality as a factor in the competitiveness enterprise competitiveness. Factors influencing on product competitiveness. Ways to to increase product competitiveness. P1. Methods for assessing product quality. Algorithm for assessing the competitiveness enterprise.	Surveys, completion of analytical tasks
12-13	4	4	2	Topic 8. Organization of primary production at the enterprise in the conditions of Industry 4.0	L1; L2: Principles of production process organization and their lessonification. Conceptual foundations of the fourth industrial revolution Industry 4.0. Types of production and their technical and economic characteristics. Methods of production organization. Production structure of an enterprise. Production cycle. Standardization of raw materials, auxiliary materials, and energy consumption for production. P1; P2: Assessment of the cost of main production at the enterprise and ways to optimize it. Modern methods for assessing the efficiency of production processes.	Surveys, completion of analytical tasks
13		1	2		Modular control work, part 2 (MCW). Includes theoretical and test tasks, problems.	Assessment of PRN for points 5-8.

14-15	4	3	4	Topic 9. Technological and organizational preparation of production.	L1; L2: Tasks and content of the stages of technological preparation production. Technological documentation of the enterprise. The essence and significance of technological unification and standardization. Technical and economic analysis of technological processes. The content and stages of organizational preparation for the production of new products. P1; P2: Organization of the design of technological processes and means of technological equipment. Preparation for the transition of production to the release of new types of products.	Questionnaires, completion of analytical tasks
16	2	2	4	Topic 10. Organization of auxiliary production. Organization of technical maintenance and repair of equipment.	L1. Organization of production support with technological equipment. Organization transport management of the enterprise. Technical maintenance and repair of equipment: essence, place in the production structure of the enterprise, and organizational forms. P1: Organization of production support with technological equipment. Management of production inventories of auxiliary production.	Surveys, performance of analytical tasks
17-18	4	4	4	Topic 11. Forecasting and planning of enterprise activities.	L1; L2: The essence and organization of strategic planning of an enterprise in market conditions. Forecasting, its essence, content, types, and methods of forecasting. System of planning indicators. Business plan of an enterprise. P1; P2: Main types of enterprise plans. Planning strategic changes in enterprise activities. Basic calculations of the effectiveness implementation of strategic changes in the activities	Surveys, performance analytical tasks
			6	Credit	Midterm exam: preparation for the midterm exam	
Everything going	36	36	48			

6. Independent work of higher education seekers

The educational plan provides for 48 hours of independent work. Independent work includes: preparation for lessonroom activities, preparation for modular control work, preparation for semester control.

Type of independent work, number of hours required

No.	Number of hours	Type of independent work
1	2	3
1	38	Preparation for lessonroom sessions
2	4	Preparation for the Module test
4	6	Preparation for semester exams in the form of a test
Total	4	

7. Academic discipline (educational component) policy

Rules for attending lessons. Higher education students are required to attend lessons as scheduled in the educational process (Internal Regulations of the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute" (clause 9.4. <https://kpi.ua/admin-rule>). The presence or absence of a student in a lesson is not assessed by adding or deducting points.

Distance learning. In the event of restrictions on university attendance due to the introduction of quarantine or martial law in the country, the educational process is carried out remotely in accordance with the Regulations on Distance Learning at Igor Sikorsky KPI (<https://osvita.kpi.ua/index.php/node/188>), Regulations for conducting semester control in remote mode (<https://osvita.kpi.ua/node/148>). In remote learning mode, lessons are held in the form of online conferences on the Google Meet platform. A link to the conference is provided at the beginning of the semester and posted on the AS "Electronic Campus". In order to ensure high-quality training of applicants, the distance learning course is available on the Sikorsky Distance Learning Platform (<https://www.sikorsky-distance.org> - <https://lessonroom.google.com/c/NzY2MjQwMzk0NzUx?cjc>). Assessment results are published in the AS.

"Electronic Campus" on the applicant's perSAnal page (<https://ecampus.kpi.ua>).

Rules of conduct in lesson. In lesson, students must adhere to the standards of ethical conduct set forth in the Code of Honor of the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute" (<https://kpi.ua/code>). On the university premises, applicants must behave in accordance with the Internal Regulations (<https://kpi.ua/admin-rule>). In lecture halls and practical lessons, as well as during lessons in the form of video conferences, mobile phones must be used in silent mode and only to search for information necessary to complete tasks, including on the Internet. During distance learning, students should use the information posted on the Sikorsky Distance Learning Platform and the Electronic Campus. Active participation, processing, and preparation of analytical materials based on the results of processing lecture material, analytical reports, and educational and research tasks.

Inclusive learning. Inclusive learning takes place in accordance with the provisions regulating the organization of education for higher education seekers with special educational needs, as well as the formation of an integrated educational environment at Igor Sikorsky KPI through the implementation of a set of measures that ensure the full involvement of such students in the educational process for obtaining higher education, taking into account their needs and capabilities. For more details: Regulations on the organization of inclusive education at Igor Sikorsky KPI (<https://osvita.kpi.ua/ppoin>)

Extracurricular activities and involvement of practicing professionals. During the study of the discipline, extracurricular activities are possible, including visits to scientific and practical events, lectures, and trainings within the scope of the discipline. To master and deepen practical skills, professional practitioners (stakeholders) may be invited to conduct joint lessons.

Recognition of learning outcomes acquired in non-formal/informal education. The procedure for recognizing such outcomes is regulated by the Regulations on the Recognition of Learning Outcomes Acquired in Non-Formal/Informal Education (<https://osvita.kpi.ua/index.php/node/179>). Individual content modules or topics of a discipline may be credited. In this case, the applicant is exempt from completing the corresponding tasks, receiving the maximum score for them in accordance with the rating assessment system. If the applicant completes an online course or other element of non-formal education "Additional information on the discipline," the applicant may be credited with individual content modules or topics of the discipline. In this case, the applicant is exempt from completing the relevant tasks, receiving the maximum score for them in accordance with the rating assessment system. In the case of informal education, if chosen independently, a validation procedure is carried out, which requires the applicant to submit an application to the dean and supporting documents. The decision on recognition or non-recognition is made by a commission consisting of the head of the department, a teacher, and the guarantor of the educational and professional program.

Rules for awarding incentive and penalty points. Incentive points that are not included in the general assessment scale can be obtained for participation in Olympiads, conferences, scientific competitions, preparation of reviews of scientific works or scientific publications. The total number of incentive points is 10, and the applicant's overall rating cannot exceed 100 points.

Assessment policy for control measures. Control measures are assessed in accordance with the Regulations on the system of assessment of learning outcomes at Igor Sikorsky KPI (<https://osvita.kpi.ua/node/37>), Regulations on current, calendar, and semester assessment of learning outcomes at Igor Sikorsky Kyiv Polytechnic Institute (<https://osvita.kpi.ua/index.php/node/32>). The lower limit for a positive assessment of the result of each assessment measure must be at least 60% of the maximum number of rating points determined for this type of measure, and a negative result is assessed as 0 points.

The RSA is communicated to students during the first lesson of the academic discipline and does not change during the course, except in cases of revision of the rating system during the semester in accordance with the Regulations on the system of assessment of learning outcomes at Igor Sikorsky KPI (clause 7) (<https://osvita.kpi.ua/node/37>)

Current control is carried out as an assessment of the learning outcomes of applicants based on operational control and the accumulation of rating points for the completion of tasks in the learning process in accordance with the RSA. Failure to pass the current control measure in synchronous mode without valid reasons is assessed as 0 points. Current control measures can take place: in synchronous mode (Module test, work in practical lessons, testing).

Calendar control is carried out twice per semester according to the assessment criteria established in the RSA and the results of current control measures. The condition for receiving a positive assessment of calendar control in an academic discipline is that the applicant's current rating is not less than 50% of the maximum possible at the time of such control.

Semester control is carried out in the form of a test according to RS -1 - "strict". The results of educational activities provided for by current control measures are assessed throughout the semester. Applicants who have fulfilled all the conditions for admission to the test and scored 60 or more points receive the corresponding rating without the need to pass the semester control measure, those who scored less than 60 points, as well as those who wish to improve their rating, pass the semester control measure. In this case, the final grade is based on the total number of points the student received for the credit test.

The teacher enters the final rating into the semester control record and, if necessary, the mark "not admitted" (failure to meet the conditions for admission to the semester control), "removed" (violation of the principles of academic integrity or moral and ethical standards of behavior), "did not appear" (the applicant was admitted but did not appear for the test).

The assessment results are displayed in the AS "Electronic Campus" on the applicant's personal page (<https://ecampus.kpi.ua>).

Deadline and retake policy. The formation of a student's semester rating is based on the timely completion of academic tasks and the completion of Module tests. If tests or assignments are missed for valid reasons (illness or significant life circumstances), students are given the opportunity to complete the assignment within the following week. Failure to complete assignments, as well as failure to meet deadlines for insignificant reasons, will not allow students to earn the corresponding rating points. The procedure for eliminating academic debt and retaking semester tests is regulated by the Regulations on current, calendar, and semester testing of learning outcomes at Igor Sikorsky KPI (<https://osvita.kpi.ua/index.php/node/32>). A student who has academic debt as a result of semester exams has the right to eliminate it in accordance with the Regulations on the provision of additional educational services to students of higher education at Igor Sikorsky KPI (<https://osvita.kpi.ua/index.php/node/177>).

Procedure for appealing the results of control measures. If an applicant disagrees with the assessment of the assessment results, they have the right to appeal on the day the results of the relevant assessment are announced to the dean of the faculty in accordance with the procedure set out in the Regulations on Appeals at Igor Sikorsky KPI (<https://osvita.kpi.ua/index.php/node/182>).

Academic integrity policy. When completing assignments for the discipline, it is necessary to comply with the policy and principles of academic integrity (<https://kpi.ua/academic-integrity>), which are set out in the Code of Honor of the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute" (<https://kpi.ua/code>), the Regulations on the system for preventing plagiarism, fabrication, and falsification at the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute" (https://document.kpi.ua/2025_HOD-697). In case of duplication of works, plagiarism, the works receive a zero rating. In case of detection of inappropriate references as a result of checking for borrowings, individual assignments are not evaluated and are returned to the applicant for revision.

Artificial intelligence usage policy. The use of artificial intelligence is regulated by the "Policy on the Use of Artificial Intelligence for Academic Activities at Igor Sikorsky KPI" (<https://osvita.kpi.ua/node/1225>). All assignments, including those completed as part of coursework, must be the result of the applicant's own original work. The use of AI for automatic generation of answers without further analysis and revision is prohibited. Applicants are not recommended to rely on AI as the sole source of information. It is important to verify and analyze the data obtained from other authoritative sources. All cases of using AI to complete assignments must be clearly indicated and documented. This applies to both the use of text generators and other AI tools. The use of AI must comply with the principles of academic integrity. Failure to comply with this provision will be considered a violation of academic ethics.

8. Types of control and rating system for assessing learning outcomes (RSA)

Assessment involves the use of a rating system (RS -1 "strict") in accordance with the Regulations on the system of assessment of learning outcomes at Igor Sikorsky KPI (<https://osvita.kpi.ua/node/37>). The maximum total rating for the course is 100 points. The lower limit for a positive assessment of each control measure is 60% of its rating score.

Control measures and criteria for their assessment

8.1. Current assessment (max 100 points)

- answers in practical lessons (quizzes);
- completion of analytical tasks;
- Module test .

8.1.1. Work in practical lessons (max 70 points)

1. Answers in practical lessons (quizzes) (max 20 points): Calculation per answer (10 answers):

- 2 points • active participation, well-reasoned answers, relevant additions
- 0 points • Passivity

8.1.2. Completion of practice-oriented analytical tasks (max 50 points). Calculation per task (10 tasks):

5 points – High-quality task completion, well-reasoned and proven results

3-4 points – Task completed with certain inaccuracies that affect the result
0 points – Task not completed or completed incorrectly

8.1.3. Module test (2 parts, each – max 15 points) includes:

1) a theoretical question (5 points), 2) an analytical task (10 points).

15-13 points 1) the question is presented comprehensively, accurately, and logically;

2) the analytical task is completed correctly, the results are justified

13-11 points 1) the question is answered correctly, sufficiently comprehensively, and without signs of plagiarism;

2) the logic of the analytical task is consistent, but there are minor errors

10-9 points 1) the question is not sufficiently disclosed;

2) the logic of the analytical task solution shows a lack of understanding of its essence, the

task is performed on the basis of assumptions, insufficiently substantiated. The tasks of the test have not been completed or have been completed incorrectly

8.2. Calendar control.

Calendar control is carried out twice per semester.

Week 7 – Requirements for certification: current rating of at least 15 points, completed Module test, completed at least 40% of the tasks;

Week 14 - Requirements for certification: current rating of at least 25 points.

8.3. Semester control (test) (max 100 points)

Consists of the current rating for the completion of all types of work.

Applicants who have fulfilled all the conditions for admission to the test and scored 60 points or more receive the corresponding rating without the need to pass the semester control event, which is transferred to the final assessment according to the table.

Applicants who have fulfilled the conditions for admission to the test but have scored less than 60 points take the semester control event. In this case, the final grade is obtained by the sum of points that the student received for the test, which is converted to the final grade according to the table.

If the applicant has fulfilled the conditions for admission to the exam and received more than 60 points, but wishes to improve their result, they may take part in the exam test. In this case, the final grade is calculated based on the number of points the student received for the exam test, which is converted to a final grade according to the table. If, based on the results of the exam, the applicant received fewer points than the number of points received based on the results of the current control measures, then, according to the "strict" approach, the applicant receives a rating based on the results of the exam, which is converted to a final grade according to the table.

The conditions for admitting the applicant to the semester assessment are the completion of educational tasks and a Module test .

Calculation of points for completing the test control work:

- **theoretical questions** (4 questions, max 40 points) are intended to reveal the level of knowledge of the material as a whole:
 - 10 points – The answer is complete, detailed, and logically structured. Demonstrates a deep understanding of the theoretical material, correct use of terminology, and provides detailed justification. The answer is clear, with accurate examples and arguments.
 - 9-7 points – The answer is detailed but contains minor flaws in the argumentation or use of terms. Minor logical errors are possible, but the overall content is correct.
 - 6 points – The answer is partially correct, but contains significant flaws in the explanations or reasoning. Inaccurate terminology is used, or the main arguments are insufficiently substantiated. The answer needs clarification.
 - 0 points – No answer () The answer is missing or contains critical errors that indicate a lack of understanding of the material. The presentation is not logical or there are no answers to the questions.

- **Analytical task.** Requires completion of three tasks (max 60 points):
 - The task is completed in full with accurate calculations and in-depth analysis.
 - 20-19 points All aspects of the task have been carefully considered, and the results are logically argued and justified. The answer has a clear structure and uses appropriate terminology (at least 95%).
 - The task has been completed with minor inaccuracies or incomplete disclosure of certain aspects. The main issues are covered, but there are minor deviations in the analysis, reasoning, or details of the calculations. The use of terminology is mostly correct;
 - 18-15 points The task is partially completed, with noticeable errors in calculations or analysis. Not all requirements of the task have been properly addressed, the argumentation is insufficiently developed, and the use of terminology has systematic shortcomings. (at least 60%); The task has not been completed or has been completed with critical errors that indicate a lack of understanding of the essence of the task. There is no logical structure, and the analysis or calculations have not been performed properly.
 - 14-12 points

The maximum score for the course is 100 points.

Correspondence between rating points and university scale grades:

Number of points	Grade
100-95	Excellent
94	Very good
84	Good
74-65	Satisfactory
64-60	Sufficient
Less than 60	Unsatisfactory

Grades in the semester control report, in case of failure to meet the specified conditions for passing the semester control:

Mark	Explanation
Not Admitted	<i>Failure to meet the conditions for admission to semester control</i>
Removed	<i>Violation of the principles of academic integrity or moral and ethical standards of conduct</i>
Did not appear	<i>Applicant was admitted but did not appear for the exam</i>

9. Additional information on the discipline (educational component)

List of questions for semester assessment (Appendix A to the syllabus)

Certificates of completion of distance or online courses on relevant topics may be included in the applicant's rating. Recommended online courses on the topics of lectures on online education platforms (massive open online course platforms) Coursera, Prometheus, etc. The decision on recognition or non-recognition is made by a commission consisting of the head of the department, the teacher, and the guarantor of the educational and professional program. The teaching of the discipline may be transferred to a distance learning format under appropriate conditions in accordance with university regulations.

Work program for the academic discipline (syllabus):

Compiled by Marina Mikhailovna Duchenko, Associate Professor of the Department of Economic Cybernetics, Candidate of Economic Sciences, Associate Professor

Approved by the Department of Economic Cybernetics (Minutes No. 21 dated June 27, 2025)

Approved by the Methodological Commission of the Faculty of Management and Marketing (Minutes No. 11 dated June 30, 2025)

Updated in accordance with the new edition of the "Regulations on the system of assessment of learning outcomes at Igor Sikorsky KPI" (Order No. NOD/761/25 dated 19.09.2025)

Re-approved by the Department of Economic Cybernetics (Minutes No. 3 of 24.09.2025)

Approved by the Methodological Commission of the Faculty of Management and Marketing (Minutes No. 3 dated October 7, 2025)

APPENDIX A
Questions for the exam.

1. Describe the difference between the balance sheet value, initial value, and liquidation value of fixed assets.
2. Compare the advantages and disadvantages of the straight-line and cumulative methods of depreciation.
3. Compare the advantages and disadvantages of the straight-line and production methods of depreciation.
4. Describe the difference between physical and functional wear and tear of fixed assets.
5. Describe the difference between the concepts of "return on assets" and "capital intensity."
6. Describe the concept of "return on production assets."
7. Describe the difference between the concepts of "royalty" and "lump sum payment."
8. Provide the structure of current assets in the manufacturing sector.
9. Provide the structure of current assets in the sphere of circulation.
10. Explain the difference between transport, technological, and reserve stocks of material resources.
11. Explain the term "staff turnover."
12. Describe the difference between the concepts of "output" and "labor intensity."
13. Indicate the difference between basic and additional wages.
14. List the forms of piecework wage systems.
15. Explain the difference between forms and systems of remuneration.
16. Describe the difference between piecework-progressive and piecework-regressive forms.
17. Describe the structure of payroll taxes.
18. Describe the difference in composition between cost and price.
19. Describe the difference between variable and fixed costs.
20. Explain the essence of the "break-even point."
21. Explain the parametric method of calculating cost.
22. Describe the difference between income and gross profit.
23. Describe the types of production.
24. Provide a description of workplaces for different types of production.
25. Provide the structure of the cycle of creation and development of new products.
26. Provide options for transitioning to the production of new types of products.
27. Describe the difference between primary, auxiliary, and service processes.
28. Describe the procurement, processing, and assembly stages of production preparation.
29. Describe the difference between auxiliary and service processes.
30. Provide the structure of the production cycle.
31. Describe the types of movement of items by operation.
32. Indicate the methods of production organization.
33. List and describe the company's plans.
34. Provide a description of strategic change planning.
35. Outline the necessity and structure of business planning.
36. Types of business associations.
37. The market environment for enterprises and organizations.
38. Concepts and components of the external business environment.
39. Macroenvironmental actors and their impact on production.
40. General characteristics of the market.
41. Indicators of enterprise production volume.
42. Concept, lessonification, and structure of perSAnnel.
43. Determining the number of employees.
44. Calculation of the balance of an employee's working time.
45. Contractual system of employee recruitment.
46. General characteristics of capital and production funds.
47. Fixed assets of an enterprise: concept, composition, structure.
48. Depreciation of fixed assets. Types of depreciation. Replacement of fixed assets.

49. Depreciation: concept, types, methods.
50. Indicators of fixed asset utilization efficiency.
51. Intangible resources of an enterprise: concept and types.
52. Intangible assets. Concept and protection of property rights.
53. Concept, essence, composition, structure of working capital.
54. Working capital standards.
55. Indicators of the efficiency of working capital use.
56. Indicators and ways to improve the use of materials and raw materials
57. Investments: concept, composition, structure.
58. Concept and types of capital investments.
59. Financial investments. Securities.
60. Assessment of investment efficiency.
61. General characteristics of innovation processes.
62. Scientific and technological progress, its general and priority directions.
63. Production process: concept, structure, and principles of organization.
64. Organizational types of production.
65. Staff productivity: general characteristics and essence.
66. Labor productivity indicators and methods for determining them.
67. Time norm: concept, essence. Calculation methodology.
68. Factors of labor productivity growth.
69. Wages: concept, essence, and functions.
70. Wage organization. Tariff system.
71. Forms and systems of wages.
72. Motivation for work.
73. Wage supplements and allowances.
74. State regulation of wages.
75. State guarantees and support for workers.
76. The essence and functions of enterprise finance.
77. Types of financial resources and sources of their formation.
78. General characteristics of expenses. lessonification of expenses.
79. The concept of production cost. Cost estimate.
80. The essence and methods of costing.
81. Technical and economic factors for reducing production costs.
82. Price: general characteristics and functions.
83. Structure and types of prices.
84. Pricing methods.
85. Indirect taxes and their impact on pricing.
86. Concept, essence, and sources of enterprise income.
87. The essence and indicators of profit.
88. Areas of profit utilization.
89. General characteristics of taxes paid by an enterprise.
90. Factors of profit growth.
91. Profitability: concept, essence, and types.
92. Methods for calculating profitability indicators.
93. Assessment of financial stability and solvency of enterprises.
94. Calculation of the break-even point.
95. Factors of production efficiency growth.
96. State regulation of entrepreneurial activity.