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**FEDERATION** 

Уникальный программный ключ:
8db180d1a3f02ac9e60521**Ecderal State** Autonomous Educational Institution of Higher Education

"Moscow Polytechnic University"

APPROVE Vice-President International Affairs /Yu.D. Davydova/ 2024

> Dean of the Faculty of Economics and Management /A.V. Nazarenko/ 2024

#### WORKING PROGRAM OF THE DISCIPLINE

"Production management"

Field of study 38.03.02 Management

Educational program (profile) "Business Process Management"

> Qualification (degree) Bachelor

> > Form of study Part-time

#### **Developer(s):**

Art. Lecturer at the Department of Management

/L.V. Borodacheva/

Agreed:

Head of the Department of Management, Ph.D., Associate Professor

/E.E. Alenina/

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#### 1. Goals, objectives and planned learning outcomes in the discipline

The main goals of mastering the discipline "Production Management" include:

- to form a systematic understanding of the essence and content of production management, its goals, objectives, methodology, place and role in the system of economic sciences and practical management;
- teach how to coordinate the activities of performers using methodological tools for implementing management decisions in the field of functional management to achieve specific goals of the organization.

The main objectives of mastering the discipline "Production Management" include:

- studying the practical side of the functioning of manufacturing enterprises;
- study of existing production management systems;
- mastery of basic techniques for planning and developing a production plan.

Training in the discipline "Production Management" is aimed at developing the following competencies in students:

## Code and name of competencies

# **PK-1** Able to regulate processes of organizational units or develop administrative regulations for organizational units

#### **Indicators of Competency Achievement**

IPK-1.1. Knows the theory of process management; principles of process classification; methods for structuring processes; basics of operational management; methods of collecting information (observations, data recording, timekeeping, photographs of the working day, interview and questionnaire techniques, analysis of documents and reporting information, studying feedback from stakeholders); methods for designing functional role models; methods for classifying information about the process and the process environment; principles and rules for working with normative and methodological documentation; requirements for the development of process regulations; fundamentals of economics, cost accounting and performance assessment; process modeling notations; methods for increasing the efficiency of processes and administrative regulations; basics of implementing changes; basics of business process modeling; methodological documents and rules for monitoring the compliance of processes or administrative regulations; methods for assessing the reliability of collected information; methods for analyzing the collected information; rules for preparing reports and conclusions based on control results; methods for assessing the effectiveness of processes or administrative regulations.

**IPK-1.2.** Able to analyze information about process boundaries, process requirements, process goals or administrative regulations; analyze areas of responsibility, stakeholders of the process, current regulations, resources, inputs, outputs and indicators of the process or administrative regulations; analyze the composition and sequence of operations that make up a process or administrative regulation; find necessary documents and information about the process or administrative regulations in paper and electronic form information systems; carry out observations, interviews and questionnaires; aggregate and summarize collected information; carry out classification of processes and objects in the process environment or administrative regulations; identify shortcomings, inconsistencies in the functioning of the process or administrative regulations, formulate and justify proposals for their correction; monitor the compliance of developed documents with regulatory and methodological documentation; evaluate resources needed to improve processes or administrative regulations; communicate, hold working meetings, find consensus; use software to develop process regulations or administrative regulations; develop local regulations in accordance with regulatory and methodological documents; develop process diagrams or administrative regulations; assess the resources needed to implement process regulations or administrative regulations or proposals to improve their efficiency; develop, coordinate and approve action plans, evaluate the achievement of results, develop corrective measures to achieve plans; provide consulting assistance to employees of the organization; select control points that allow you to assess the degree of compliance with regulations and draw up control plans; evaluate the reliability of information obtained during control; analyze indicators of efficiency and effectiveness of processes and administrative regulations; identify deviations from established criteria and indicators of the functioning of processes and administrative regulations; calculate the efficiency of processes and administrative regulations; identify potential for improving the efficiency of a process or administrative regulation; formulate and justify proposals to improve the efficiency of processes or administrative regulations; prepare reports and conclusions based on the results of control activities.

**IPK-1.3.**Possesses the skills to determine the goals of the process of a division of an organization or the administrative regulations of a division of an organization; determining the boundaries of the process of a division of an organization or the administrative regulations of a division of an organization: determination of stakeholders, owner and participants in the process of a division of the organization or administrative regulations of the division of the organization; determining the inputs and outputs of the process of a subdivision of an organization or the beginning and result of the implementation of administrative regulations of a subdivision of an organization; clarifying the sequence of work in the process of subdividing an organization or the administrative regulations of a subdivision of an organization; clarification of the resources used, Russian and international legislation, local regulations, reporting documents necessary to carry out the process of a division of an organization or the administrative regulations of a division of an organization; identifying the responsible employees of the unit for each work in the process of subdividing the organization or the administrative regulations of the organization's subdivision; collecting information about the current planning and reporting system for the work process of a division of an organization or the administrative regulations of a division of an organization; collecting information about the progress and results of the process of a division of an organization or the administrative regulations of a division of an organization; registration of the results of information collection; systematization of collected information about the process of subdividing an organization or the administrative regulations of a subdivision of an organization; development of process regulations for a division of an organization or administrative regulations for a division of an organization and regulatory documents (instructions, regulations); development of procedures for monitoring the implementation of the process regulations of an organization's unit or the administrative regulations of an organization's unit; developing proposals to improve the efficiency of the process of a division of an organization or the administrative regulations of a division of an organization; planning measures to put into effect the process regulations of a division of an organization or the administrative regulations of a division of an organization; implementation of the process regulations of a division of an organization or the administrative regulations of a division of an organization; implementation of proposals to improve the efficiency of the process of a division of an organization or the administrative regulations of a division of an organization; assessing the effectiveness of measures to put into effect the process regulations of a division of an organization or the administrative regulations of a division of an organization; determining procedures for monitoring the implementation of the process regulations of an organization's unit or the administrative regulations of an organization's

unit; collecting information on the progress and results of the implementation
of the process of a division of an organization or the administrative
regulations of a division of an organization; analysis of collected information
for compliance with criteria, established for control; assessing the
effectiveness of the process of a division of an organization or the
administrative regulations of a division of an organization; developing
recommendations to improve the efficiency of the processes of an
organization's unit or administrative regulations of an organization's unit;
registration of the results of monitoring the implementation of the process
regulations of an organization's unit or the administrative regulations of an
organization's unit.

#### 2. Place of discipline in the structure of the educational program

The discipline belongs to the mandatory part of block B1 "Disciplines (modules)". The discipline "Production Management" is logically, substantively and methodologically interconnected with the following disciplines and practices of the EP:

- Quality management
- Technology for organizing management interaction
- Process management

#### 3. Structure and content of the discipline

The total labor intensity of the discipline is 4 credit units (144 hours).

## **3.1** Types of educational work and labor intensity (according to forms of study)

#### 3.1.1. Part-time education

No.	Type of advectional week	Quantity	Semesters	
	Type of educational work	hours	5	
1	Auditory lessons	54	54	
	Including:			
1.1	Lectures	18	18	
1.2	Seminars/practical sessions	36	36	
2	Independent work	90	90	
3	Interim certification			
	Test/differential test/exam	Exam	Exam	
	Total	144	144	

#### 3.2 Thematic plan for studying the discipline

(according to forms of study)

#### 3.2.1. Part-time education

No.	Sections/topics		Labor intensity, hour	
p/p	disciplines	T of	Classroom work	In

		Lectures	Seminars/practic al sessions	Laboratory exercises	Practical training	
1.1	Topic 1 Production as a system	2	4			10
1.2	Topic 2 Basics of production management	2	4			10
1.3	Topic 3 Organizational structures of enterprises	2	4			10
1.4	Topic 4 Basic principles of organizing the production process	2	4			10
1.5	Topic 5 Organization of the production process in time and space	2	4			10
1.6	Topic 6 Operational production planning	2	4			10
1.7	Topic 7 Marketing in the production management system	2	4			10
1.8	Topic 8 Inventory management in the enterprise	2	4			10
1.9	Topic 9 Formation of the enterprise production program	2	4			10
	Total	18	36			108

#### 3.3 Contents of the discipline

- Topic 1 Production as a system
- Topic 2 Basics of production management
- Topic 3 Organizational structures of enterprises
- Topic 4 Basic principles of organizing the production process
- Topic 5 Organization of the production process in time and space
- Topic 6 Operational production planning
- Topic 7 Marketing in the production management system
- Topic 8 Inventory management in the enterprise
- Topic 9 Formation of the enterprise production program

#### 3.4 Topics of seminars/practical and laboratory classes

#### 3.4.1. Seminars/practical sessions

Topic 1 Production as a system	Seminar session 1
Topic 2 Basics of production management	Seminar session 2
Topic 3 Organizational structures of enterprises	Seminar session 3
Topic 4 Basic principles of organizing the production process	Seminar session 4
Topic 5 Organization of the production process in time and space	Seminar session 5
Topic 6 Operational production planning	Seminar session 6
Topic 7 Marketing in the production management system	Seminar session 7
Topic 8 Inventory management in the enterprise	Seminar session 8

Seminar session 9

#### 4. Educational, methodological and information support

#### 4.1 Main literature

1. Rusetskaya, O. V. Theory of organization: a textbook for universities / O. V. Rusetskaya, L. A. Trofimova, E. V. Pesotskaya. - Moscow: Yurayt Publishing House, 2022. - 391 p. - (Higher education). — ISBN 978-5-9916-8402-6. — Text: electronic // Educational platform Urayt [website]. — URL: <a href="https://urait.ru/bcode/488693">https://urait.ru/bcode/488693</a>

#### 4.2 Additional literature

- 1. Frolov, Yu. V. Organization theory and organizational behavior. Methodology of organization: textbook for universities / Yu. V. Frolov. 2nd ed., rev. and additional Moscow: Yurayt Publishing House, 2022. 116 p. (Higher education). ISBN 978-5-534-09522-7. Text: electronic // Educational platform Urayt [website]. URL: <a href="https://urait.ru/bcode/491862">https://urait.ru/bcode/491862</a>
- 2. Abramov, V. S. Strategic management: textbook and workshop for universities / V. S. Abramov, S. V. Abramov; edited by V. S. Abramov. 2nd ed., revised. and additional Moscow: Yurayt Publishing House, 2021. 444 p. (Higher education). ISBN 978-5-534-14595-3. Text: electronic // Educational platform Urayt [website]. URL: <a href="https://urait.ru/bcode/477973">https://urait.ru/bcode/477973</a>

#### 4.3 Electronic educational resources

1. An electronic educational resource on the discipline is under development.

#### 5. Logistics support

Auditorium for lectures and seminars of the general fund. Study tables with benches, a blackboard, a portable multimedia complex (projector, projection screen, laptop). Teacher's workplace: table, chair.

#### 6. Guidelines

#### 6.1 Methodological recommendations for teachers on organizing training

Current control (carried out by the lecturer and teacher): correctness of answers to questions on the topics covered; assessment of existing opinions and approaches to solving specific problems; essay preparation; intermediate testing in individual sections of the discipline.

When performing routine monitoring, it is possible to use test material. Samples of control questions and tasks for conducting ongoing monitoring are given in the appendix. When implementing a bachelor's degree program, an organization has the right to use e-learning and distance learning technologies. All materials are posted in the Moscow Polytechnic Library.

When training people with disabilities, e-learning and distance educational technologies must provide for the possibility of receiving and transmitting information in forms accessible to them.

#### 6.2 Guidelines for students on mastering the discipline

A lecture is a systematic, consistent, monologue presentation by a teacher of educational material, usually of a theoretical nature. When preparing a lecture, the teacher is guided by the work program of the discipline. During lectures, it is recommended to take notes, which will allow you to subsequently recall the studied educational material, supplement the content when working independently with literature, and prepare for the exam.

You should also pay attention to categories, formulations that reveal the content of certain phenomena and processes, scientific conclusions and practical recommendations, positive experience in oratory. It is advisable to leave margins in your working notes in which to make notes from the recommended literature, supplementing the material of the lecture you listened to, as well as emphasizing the special importance of certain theoretical positions.

Conclusions from the lecture summarize the teacher's thoughts on educational issues. The teacher provides a list of used and recommended sources for studying a specific topic. At the end of the lecture, students have the opportunity to ask questions to the teacher about the topic of the lecture. When delivering lectures on the discipline, electronic multimedia presentations can be used.

Guidelines for students when working at the seminar

Seminars are implemented in accordance with the working curriculum with sequential study of the topics of the discipline. In preparation for the seminars, the student is recommended to study the basic literature, familiarize himself with additional literature, new publications in periodicals: magazines, newspapers, etc. In this case, you should take into account the recommendations of the teacher and the requirements of the curriculum. It is also recommended to finalize your lecture notes by making appropriate notes from the literature recommended by the teacher and provided for by the curriculum. Abstracts should be prepared for presentations on all educational issues brought up for the seminar.

Since the student's activity in seminar classes is the subject of monitoring his progress in mastering the course, preparation for seminar classes requires a responsible attitude. During interactive classes, students must be active.

Guidelines for students on organizing independent work

Independent work of students is aimed at independent study of a separate topic of the academic discipline. Independent work is mandatory for each student, its volume is determined by the curriculum. When working independently, the student interacts with the recommended materials with the participation of the teacher in the form of consultations. To perform independent work, methodological support is provided. The electronic library system (electronic library) of the university provides the possibility of individual access for each student from any point where there is access to the Internet.

A presentation (from the English word - presentation) is a set of color pictures-slides on a specific topic, which is stored in a special format file with the PP extension. The term "presentation" (sometimes called "slide film") is associated primarily with the information and advertising functions of pictures, which are designed for a certain category of viewers (users).

In order for the presentation to be well received by the audience and not cause negative emotions (subconscious or fully conscious), it is necessary to follow the rules of its design.

A presentation involves a combination of information of various types: text, graphics, music and sound effects, animation and video clips. Therefore, it is necessary to take into account the specifics of combining pieces of information of different types. In addition, the design and display of each of the listed types of information is also subject to certain rules. So, for example, the choice of font is important for textual information, brightness and color saturation are important for graphic information, and optimal relative position on the slide is necessary for the best possible perception of them together.

In addition to the correct arrangement of text blocks, we must not forget about their content - the text. Under no circumstances should it contain spelling errors. You should also take into account the general rules of text formatting.

After creating a presentation and its design, you need to rehearse its presentation and your speech, check how the presentation as a whole will look (on a computer screen or projection screen), how quickly and adequately it is perceived from different places in the audience, under different lighting, noise, in an environment as close as possible to real performance conditions.

#### 7. Appraisal Fund

#### 7.1 Methods for monitoring and assessing learning outcomes

#### **Indicator** of the level of competence development

		Produc	tion managen	nent	
Federa	l State Educational S	Standard of Higher Educatio	n 38.03.02 "M	anagement"	,
n the	process of mastering	this discipline, the student f	forms and dem	onstrates the	e following:
compe	etencies:				
COM	PETENCIES	List of components	Technology	Form of	Degrees of levels of mastering
INDE	XFORMULATION		for	assessment	competencies
			developing	tool**	
			competencies		
PK-1	Able to regulate	Know: basics of	lecture,	DS, E	A basic level of
	processes of	production planning,	independent		- knowledge of the basics of
	organizational	theoretical foundations for	work,		production planning;
	units or develop	constructing production	seminar		Increased level
	administrative	systems;	classes		-Possession of production process
	regulations for	Be able to: analyze internal			planning skills.
	organizational	and external factors that			
	units	determine the production			
		management of the			
		enterprise, production and			
		production processes;			
		make decisions in the field			
		of production management			
		Own: skills of			
		methodological tools for			
		implementing planned			
		management decisions in			
		the field of production			
		management to achieve the			
		goals of specific work			

#### 7.2 Scale and criteria for assessing learning outcomes

Scales for assessing the results of intermediate certification and their description:

#### Form of intermediate certification: exam.

Interim certification of students in the form of an exam is carried out based on the results of completing all types of academic work provided for by the curriculum for a given discipline (module), while taking into account the results of ongoing monitoring of progress during the semester. Assessment of the degree to which students have achieved the planned learning outcomes in the discipline (module) is carried out by the teacher leading classes in the discipline (module) using the method of expert assessment. Based on the results of the intermediate certification for the discipline (module), a grade of "excellent", "good", "satisfactory" or "unsatisfactory" is given.

Only students who have completed all types of academic work provided for by the work program in the discipline "Production Management" (passed the intermediate control) are allowed to take the intermediate certification.

Grading scale	Description
Great	All types of educational work provided for by the curriculum have been completed. The student demonstrates compliance of knowledge, abilities, and skills with those given in the tables of indicators, operates with acquired knowledge, abilities, skills, and applies them in situations of increased complexity. In this case, minor errors, inaccuracies, and difficulties during analytical operations and the transfer of knowledge and skills to new, non-standard situations may be made.
Fine	All types of educational work provided for by the curriculum have been completed. The student demonstrates incomplete, correct compliance of knowledge, skills and abilities with those given in the tables of indicators, or if 2-3 insignificant errors were made.
Satisfactorily	All types of educational work provided for by the curriculum have been completed. The student demonstrates the consistency of knowledge, which covers the main, most important part of the material, but at the same time one significant error or inaccuracy was made.
Unsatisfactory	One or more types of educational work provided for by the curriculum have not been completed. The student demonstrates incomplete compliance of knowledge, abilities, skills with those given in the tables of indicators, significant mistakes are made, a lack of knowledge, abilities, skills is manifested in a number of indicators, the student experiences significant difficulties in operating knowledge and skills when transferring them to new situations.

#### **7.3** Evaluation tools

## List of assessment tools for the discipline "Production management"

OS	Name of the		Submission of the
No.	assessment tool	Brief description of the evaluation tool	assessment tool to the
NO.	assessment tool		Federal Fund
		A product of a student's independent work, which	
1	Report,	is a public speech presenting the results obtained	Topics of reports,
1	message (DS)	in solving a specific educational, practical,	messages
		educational, research or scientific topic	
		Final form of knowledge assessment. In higher	
2	Exam (E)	educational institutions they are held during the	Questions for the exam
		session.	

#### 7.3.1. Current control

Topics of reports on the discipline "Production management" (formation of competence PC-1)

- 1. Enterprise in the production management system.
- 2. Production systems in the modern Russian economy.
- 3. Organizational structure of the enterprise.
- 4. Types and types of production structure.
- 5. Production management functions and their role in the production process.
- 6. Enterprise management system.
- 7. Production management methods.
- 8. Product quality management.
- 9. Classification of product quality indicators.
- 10. Characteristics of product quality indicators.
- 11. Stages of the product life cycle.
- 12. Methods for assessing the level of product quality.
- 13. The importance and objectives of standardization and certification of products.
- 14. Technical preparation of production.
- 15. Network models of production program planning.
- 16. Classification of inventories in production.
- 17. Order portfolio and the procedure for its formation.
- 18. Determination of equipment load.
- 19. Production capacity of the enterprise and indicators of its use.
- 20. The procedure for developing a production program.
- 21. Matrix structure of production management.
- 22. Methodology for calculating the average production capacity.
- 23. Costs of ordering and holding inventory in production.
- 24. Methodology for determining the optimal purchase size.
- 25. Determination of current and safety stocks in production.
- 26. Competitiveness of industrial products.
- 27. Production cycle and its structure.

#### Report evaluation criteria

N	Criterion	Grade			
o.		ex.	chorus	satisfaction	unsatisfactory
1	Structure of the report	The report contains semantic parts balanced in volume	The report contains three semantic parts, unbalanced in volume	One of the semantic parts is missing from the report	The report does not show the presence of semantic parts
2	Contents of the report	The content reflects the essence of the problem under consideration and the main results obtained	The content does not fully reflect the essence of the problem under consideration or the main results obtained	The content does not fully reflect the essence of the problem under consideration and the main results obtained	The content does not reflect the essence of the problem under consideration or the main results obtained
3	Mastery of the material	The student has complete command of the material presented, is problem oriented, and	The student knows the material presented, is oriented in the problem, finds it difficult to answer some questions	The student is not fluent enough in the material being presented and is poorly oriented in the problem	The student does not know the material being presented and has poor understanding of the problem

		answers questions freely			
4	Matching theme	The presented material fully corresponds to the stated topic	The presented material contains elements that are not relevant to the topic	The material presented contains a large number of elements that are not related to the topic.	The material presented is slightly relevant to the topic

#### 7.3.2. Interim certification

## Questions for the discipline exam "Production management" (formation of competencePC-1)

- 1) The role and functions of production management.
- 2) Tasks of a production manager. Requirements for
- 3) to the manager. The main function of a production manager?
- 4) Production concept. History of production research.
- 5) Describe the production process and its essence.
- 6) Basic principles of organizing production processes.
- 7) Types of organization of the movement of production processes in time.
- 8) Types of production. Their characteristics. Methods of organization
- 9) production: in-line and non-in-line.
- 10) Production principles for each type of production.
- 11) The essence of organizing production processes in space and in time.
- 12) Production management functions. Control cycle production.
- 13) Definition of a production system. Mechanism functioning of the production system. Main function production system.
- 14) Definition and composition of the operating system.
- 15) Stages of the production management cycle. Planning as a component of production management.
- 16) Classification of production processes.
- 17) Automated control systems, their characteristics and role in organizing production.
- 18) High technologies and knowledge-intensive industries.
- 19) Production program, definition, main sections.
- 20) Production structure of the enterprise.
- 21) Concept and types of production processes.
- 22) Principles of organizing production processes.
- 23) Types of production and their technical and economic characteristics.
- 24) Production cycle. Structure of the production cycle.
- 25) Organization of a complex production process in time.
- 26) Organization of the production process in space.
- 27) Specialization of the enterprise and its structural divisions. Types of specialization of enterprises and their production divisions.
  - 28) Forms of production organization: concentration, combination.
  - 29) Forms of production organization: specialization and cooperation.

- 30) The concept of management decisions.
- 31) Classification and characteristics of decisions in production management.
- 32) Assessment and selection of management decisions in production management.
- 33) Organization of non-flow production methods.
- 34) Organization of continuous production methods.
- 35) Classification of production lines.
- 36) Conditions of organization and parameters of production lines.
- 37) Features of the organization of single-subject production lines.
- 38) Features of the organization of multi-subject production lines.
- 39) Economic efficiency of continuous production.
- 40) Planning the enterprise's needs for various types of equipment.
- 41) The essence and main elements of labor organization for workers.
- 42) Scientific organization of labor (SLO): its meaning, tasks, functions and principles.
- 43) Spatial organization of production.
- 44) Choosing the location of the organization.

#### Ticket form

MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION
FEDERAL STATE AUTONOMOUS EDUCATIONAL INSTITUTION
HIGHER EDUCATION
"MOSCOW POLYTECHNIC UNIVERSITY"
(MOSCOW POLYTECH)

Faculty of Economics and Management, Department of Management
Discipline: Production management
Direction of training: 38.03.02 "Management"
Course: _, group, form of study: full-time, part-time and part-time
TICKET No. 1.
<ol> <li>Question assessing the competence of PK-1</li> <li>Question assessing the competence of PK-1</li> </ol>
Approved at the department meeting "" 202_, minutes No
Head Department of Management/Alenina E.E./