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

Faculty of Economics and Management



**OPERATIONAL PROGRAM OF THE DISCIPLINE**  
**Project and Program Life Cycle and Planning in Professional Activit**

Direction of training/specialty  
**42.04.01 Advertising and public relations**  
**Profile/specialization**  
**Innovative marketing in advertising**  
Qualification  
master

Forms of study  
part-time

**Moscow, 2021**

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

The purpose of mastering the discipline "Life cycle and project and program planning in professional activity" is the formation of a system of knowledge, skills and abilities for working with information technology related to the functioning at all stages of their life cycle in the process of professional activity of modern enterprises.

The discipline "Life cycle and planning of the project and programs in professional activity" is studied at the 2nd year of study. This discipline is a logical continuation of a number of courses studied by students in the bachelor's program of the direction "Methodology and methods of scientific research in professional activities", including "Effectiveness of advertising and public relations", "Intra-corporate communications", "Cross-cultural analysis in professional activities" and a number of others. As a result of mastering the discipline "Life cycle and planning of projects and programs in professional activities", students will be able to apply the theoretical and practical knowledge they have gained when undergoing research practice and preparing a practice report, as well as when writing a final qualifying work.

The main tasks of studying the discipline: ensuring the optimal ratio in the assimilation by students of both theoretical and practical aspects of the educational material, taking into account the expansion of opportunities for applying the knowledge they have gained in various areas of future professional activity.

Training in the discipline "Life cycle and project and program planning in professional activities" is aimed at developing the following competencies in students:

Code and name of competencies	Competence achievement indicators
<p>UK-2. Able to determine the range of tasks within the set goal and choose the best ways to solve them, based on current legal regulations, available resources and restrictions</p> <p>OPK-1. Able to apply knowledge (at an intermediate level) of economic theory in solving applied problems</p>	<p>IUK-2.1. Formulates a set of tasks within the framework of the project goal, the solution of which ensures its achievement</p> <p>IUK-2.2. Identifies the links between the tasks set, the main components of the project and the expected results of its implementation</p> <p>IUK-2.3. Selects the best methods for planning, distributing areas of responsibility, solving problems, analyzing results, taking into account current legal regulations, available conditions, resources and restrictions, and opportunities for use</p> <p>IPOC 1.1 -Applies knowledge (at an intermediate level) of economic theory in solving applied problems, interpreting the results obtained</p> <p>IOPC 1.2-Applies knowledge of economic laws to analyze and model the real economic situation</p>

### 1. The place of discipline in the structure of the educational program

The discipline refers to the mandatory part of block B1 "Disciplines (modules)".

The study of the discipline is based on the following disciplines, the passage of practices:

- Methodology and Methods of Scientific Research in Professional Activity;
- Product Portfolio Management;
- Advertising technologies in business communication (Advertising Technologies in Business Communication);

The main provisions of the discipline should be used in the future when studying the following disciplines (practices):

- Cross-cultural analysis in professional activity (Cross-Cultural Analysis in Professional Activity);
- Methods of Economic and Social Forecasting;
- Internal Corporate Communications;
- Effectiveness of Advertising and Public Relations;

## 2. Structure and content of the discipline

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

### 2.1 Types of educational work and labor intensity

#### 3.1.1. Part-time education

	Type of study work	Number of hours	Semesters	
			3	-
<b>1.</b>	Auditory lessons	<b>36</b>	<b>36</b>	-
	including:			
1.1	Lectures	18	18	-
1.2	Seminar / practical training	18	18	-
1.3	Laboratory studies	-	-	-
<b>2.</b>	Independent work	<b>108</b>	<b>108</b>	-
	including:			
2.1	Preparation for practical exercises (study of lecture material)	36	36	-
2.2	Preparing for testing	36	36	-
2.3	Independent problem solving	36	36	-
	Intermediate certification			
	Credit/ Exam		Exam	-
	Total	<b>144</b>	<b>144</b>	-

### 3.2. Thematic plan for studying the discipline (according to the forms of education)

#### 3.2.1. Part-time education

	Sections / topics of the discipline	Amount of work					
		Total	Classroom work				Independent work
			Lectures	Tutorials	Lab. works	Practical training	
1.	Topic 1. Fundamentals of the life cycle of the project and programs in professional activities	16	2	-	-	-	14
2.	Topic 2. Models of the life cycle of the project and programs in professional activities	16	2	2	-	-	12
3.	Topic 3. Standards for the life cycle of the project and programs in professional activities	16	2	2	-	-	12
4.	Topic 4. Planning the life cycle of a project and programs in professional activities	16	2	4	-	-	10
5.	Topic 5. Resource management in the life cycle of the project and programs in professional activities	18	2	2	-	-	14
6.	Topic 6. Project and program planning technologies in professional activities	18	2	2	-	-	14
7.	Topic 7. Risks in the life cycle of the project and programs in professional activities	16	2	2	-	-	12
8.	Topic 8. Evaluation of the effectiveness and financing of the project. Content elements of project management in professional activities	20	2	2	-	-	16
9.	Final control work	8	2	2	-	-	4
	Total	<b>144</b>	<b>18</b>	<b>18</b>	-	-	<b>108</b>

### 3.3. The content of the discipline

Topic 1. Fundamentals of the life cycle of the project and programs in professional activities. The concept of the life cycle of the project and programs in professional activities. Typical model of project life cycle processes and programs in professional activity. The main stages of the life cycle of the project and programs in professional activities. Definition of the main tasks to be solved at various stages of the IP life cycle.

Topic 2. Models of the life cycle of the project and programs in professional activities. Incremental model of the life cycle of the project and programs in professional activities. An evolutionary model of the life cycle of a project and programs in professional activities. Prototype model of the life cycle of the project and programs in professional activities. The study of existing

models of the IP life cycle. Determination of preferred models of the life cycle of the project and programs in professional activities under various conditions.

Topic 3. Standards for the life cycle of the project and programs in professional activities. Appointment of project life cycle standards and programs in professional activities. Existing Russian and international standards for the life cycle of a project and programs in professional activities. Profile model of project life cycle standards and programs in professional activity. Comparative analysis of Russian and international standards of project life cycle and programs in professional activity. Development of a profile model of project life cycle standards and programs in professional activities.

Topic 4. Planning the life cycle of the project and programs in professional activities. Organization of project life cycle planning and programs in professional activities. The structure of project life cycle plans and programs in professional activities. Objectives of plans to ensure the life cycle of the project and programs in professional activities. The composition of plans at different stages of the life cycle of the project and programs in professional activities. Planning the process of implementing the project and programs in professional activities.

Topic 5. Resource management in the life cycle of the project and programs in professional activities. Key resources to ensure the life cycle of the project and programs in professional activities. Resources of specialists to ensure the life cycle of the project and programs in professional activities. Resources to ensure the functional suitability of project development and programs in professional activities. Methods for accounting for the main resources necessary to ensure the life cycle of the project and programs in professional activities. Calculation of the total costs of the project and programs in professional activities.

Topic 6. Risks in the life cycle of the project and programs in professional activities. Risks in the formation of requirements for the characteristics of complex projects and programs in professional activities. Causes and properties of defects, errors and modifications in projects and programs of professional activity. Methods for reducing risks in the design of the project and programs in professional activities. Risk assessment in the design of the project and programs in professional activities.

Topic 7. Project and program management technologies in professional activities. The main stages (technologies) of developing and implementing a social project: concept development, project viability assessment, planning, budgeting, project protection, preliminary control, project implementation stage, project correction based on monitoring results, project completion and liquidation. inability to project a system of social protection Social diagnostics and forecasting. The need for diagnosis and prognosis when working on a social project. Social diagnostics as an establishment of the degree of compliance (inconsistency) of the parameters of social reality (resources, properties of objects, social attitudes) with social indicators and standards. Purpose, functions and roles of social diagnostics in social work. The problem of establishing social indicators, norms and standards. Methods of social diagnostics. The use of diagnostic technologies, methods and techniques in social work. Technology of social forecasting. The main methods of social forecasting. Expertise as a way of social forecasting. The concept and features of social expertise. Goals and objectives of social expertise, its place in the system of work on social design. Object, subject and subjects of expert assessments of social projects. Organizational models and resources of social expertise. Examination of competitive projects and programs in the field of social work. Expert assessments in social forecasting and design. The value of expert assessments

for establishing the viability and levels of implementation of a social project. The problem of the subjectivity of expert assessments.

Topic 8. Content elements of project management in professional activities Project management processes. Project initiation processes - making a decision on project authorization. Planning processes - defining and fixing goals, planning the actions necessary to achieve the goals and content for which the project was undertaken. Execution processes - combining labor and other resources to carry out the plan. Monitoring and control processes - regular assessment of project development, monitoring to detect deviations from the plan, taking corrective actions, if necessary, to achieve the project objectives. Completion processes - formalizing the acceptance of a product, service or result, bringing the project to a proper conclusion. Team building in project activities.

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

#### **3.4.1. Seminars/practical classes**

Topic 1. Fundamentals of the life cycle of the project and programs in professional activities

Exercise. Levels of project management. Analysis of articles from periodicals on the problems of project management. (Prima Ya. G. Trends in the development of project management in Russia // ESGI. -2018.- No. 2 (18)., Valootsky V.I. Improvement of project management in Russia // Issues of Management. -2017. -No. 6 (49)., Belikova E.O. P. Project office in design - oriented organizations // Success in chemistry and chemical technology. -2017. -No. 14 (195).

Possible questions:

1. Describe the main stages in the development of the theory and practice of project management in our country and abroad.
2. Name the features of the project, which are universal and characters for any project.
3. What do the project and current operations have in common and how do they differ?
4. Give as an example any project and give it a description in accordance with various classification criteria.
5. What is the purpose of project management standards?
6. Describe the three groups of international standards in the field of project management.

Topic 2. Models of the life cycle of the project and programs in professional activities

Exercise.

1. Determine the composition of teams of 5-7 people.
2. Team work to determine the theme of the project in accordance with the following areas specified in Appendix 2 to the work program of the course "Fundamentals of project management":
  1. Career guidance projects for schoolchildren a. projects for specific faculties, b. project "Enter MosPolytech".
  2. Socially oriented projects for various categories of socially unprotected categories of the population
    - a. projects for working youth,
    - b. projects for pensioners
    - c. projects for persons with disabilities,
    - d. projects for difficult teenagers.
  3. Projects in the field of social entrepreneurship.
  4. Technology Entrepreneurship Projects a. including those involving access to crowdfunding platforms.
  5. Projects in the field of adaptation of first-year students in the university: a. media projects (media, information special projects, films, online shows, video blogs, etc.), b. spatial solutions.
  6. University-wide student events and projects aimed at developing the corporate culture of the university and student communities, including projects a. cultural, b. leisure, c. sports events.
  7. Additional educational programs for youth.

8. University brand book.
9. Volunteering projects a. historical and cultural, b. ecological, c. event-driven.
10. Projects for individual municipalities (within the listed topics).
11. Free theme.

3. Formulation of the problem, the solution of which will be devoted to the project. Control questions:

1. Regulation "On grant support for youth initiatives".
2. Intra-institutional / intra-faculty competition "Project Start".
3. Passport of the project.
4. Project reporting.

Topic 3. Standards for the life cycle of the project and programs in professional activities.

Exercise. Formulation of the goal and implementation of decomposition. Definition of project objectives. Control questions:

1. What criteria should the project objectives meet?
2. What is the role of lower level goals in the goal tree?
3. Describe the main groups of project constraints.
4. Describe the phases of the project life cycle.
5. Name the processes that each phase of the project includes.
6. List the factors that form the remote environment of the project.
7. Describe the influence of the near environment on the project.
8. Name the main stakeholders of the project.
9. What are the main possible participants of the project?
10. What are the differences in the project management functions of the project manager and curator?

11. What is the purpose of organizing stakeholder management.

Topic 4. Planning the life cycle of a project and programs in professional activities

Exercise.

1. Testing according to the method of determining Belbin's team roles, the type of temperament according to Belov.

2. Select a communication channel for the interaction of project participants. Control questions:

1. Describe the importance of leadership in project management.
2. Who is a leader?
3. Who is a project manager?
4. Team: concept, roles, stages of formation.
5. Describe personality types and their impact on the team role.
6. List the main techniques for determining team roles.

Topic 5. Resource management in the life cycle of the project and programs in professional activities

Exercise. 1. Solution of the cases "Resource and cost planning for the construction of a playground", "Cost planning for a car wash construction project" (see 112-113 Bely E.M. Project management (with a workshop): Textbook / E.M. Bely. - M.: Knorus, 2019. - 262 p.).

2. Draw up a project budget for the selected topic.

Control questions:

1. What are the main sources of project funding?
2. Name the advantages and disadvantages of using own and borrowed funds.
3. List List the advantages and disadvantages of equity project financing.
4. What forms of credit financing of projects do you know?
5. What is the role of leasing in project financing?
6. How are projects financed from budgetary sources?

Topic 6. Project and program planning technologies in professional activities



Exercise. Draw up a calendar plan for the implementation of the project by a group of students (project participants) on the selected project topic.

Control questions:

1. What are the main tasks of project planning?
2. Describe the process of planning the scope of the project.
3. List the principles for the formation of a hierarchical structure of work.
4. Specify the main scheduling tasks.
5. How can project duration be shortened?
6. What graphical scheduling methods do you know?
7. Name the forms of project financing.

Topic 7. Risks in the life cycle of the project and programs in professional activities

Exercise. Identify risks and ways to manage risks. Fill in the paragraph of the project passport "Expected results of the project" and describe what changes will occur as a result of the project. List qualitative and quantitative results, measurable indicators.

Exercise. Prepare a presentation of the project passport (outlining the main points) within the framework of the intra-institutional / intra-faculty competition "Project Start".

Control questions:

1. Describe the main groups of project execution processes.
2. Name the main functions of the project control system.
3. What are the main objects of control in the project?
4. The process of making a decision on making changes to the project.
5. How is the change management process carried out?
6. Appointment of project closing processes.
7. What is the name of the final document of the project?
8. What is the process of creating a project archive?
9. Describe the procedure for closing the project contract.
10. What is the difference between risk and uncertainty.
11. What risk response methods do companies use?

"Project start".

Control questions:

1. Name the main types of project efficiency.
2. Describe the methods for assessing the economic efficiency of projects.
3. What methods of assessing the economic efficiency of the project do you know?
4. Why is it necessary to discount cash flows when evaluating the economic efficiency of a project?
5. What sources of project financing do you know?
6. What are the advantages and disadvantages of using own and borrowed funds?
7. What projects, in your opinion, can be financed from budgetary sources?
8. What are the specific features of project financing?
9. What are the forms of project financing?

Topic 8. Evaluation of the effectiveness and financing of the project. Content elements of project management in professional activities

Task: Pre-defense of the project passport (presentation of the project with a statement of the main points) within the framework of the intra-institutional / intra-faculty competition

Topic 9. Interaction of project teams.

Exercise. Protection of the project passport (presentation of the project with a statement of the main points) within the framework of the intra-institutional / intra-faculty competition "Project Start".

Control questions:

1. What types of project organizational structures do you know?
2. Formulate the conditions for successful interaction between project teams.

3. Describe the advantages and disadvantages of using a matrix structure in project management.
4. Describe the advantages and disadvantages of using a network structure in project management.
5. Describe the advantages and disadvantages of using a project structure in project management.
6. Describe the stages of the team's life cycle.
7. List the conditions and threats that provoke the “split” of the team.

### **3.4.2. Laboratory studies**

Laboratory classes in the discipline are not provided by the curriculum.

### **3.5 Topics of course projects (term papers)**

Course project (term paper) in the discipline of the curriculum is not provided

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

### **4.1 Regulatory documents and GOSTs**

Regulatory documents and GOSTs are not used in the study of the discipline.

### **4.2. Main literature**

1. Gubich, L.V. Implementation of information technologies to support the life cycle of products at industrial enterprises: a method. recommendations / L.V. Gubich, N.I. Petkevich; ed. HE. Pruchkovskaya. - Minsk: Belarusian Science, 2012. - 189 p. - ISBN 978-985-08-1488-3; The same [Electronic resource]. - URL: <http://biblioclub.ru/index.php?page=book&id=142897>
2. Zub, A. T. Project management: textbook and workshop for universities / A. T. Zub. - Moscow: Yurayt Publishing House, 2022. - 422 p. - (Higher education). - ISBN 978-5-534-00725-1. — Text: electronic // Educational platform Urayt [website]. — URL: <https://urait.ru/bcode/489197>

### **4.3. Additional literature**

1. Кузнецова, Е. В. Управление портфелем проектов как инструмент реализации корпоративной стратегии: учебник для бакалавриата и магистратуры / Е. В. Кузнецова. — 2-е изд., перераб. и доп. — Москва: Издательство Юрайт, 2019. — 177 с. — (Авторский учебник). — ISBN 978-5-534-07425-3. — Текст: электронный // ЭБС Юрайт [сайт]. — URL: <https://biblio-online.ru/bcode/433975> (дата обращения: 16.05.2023).
2. Управление проектами: учебник и практикум для вузов / А. И. Балашов, Е. М. Рогова, М. В. Тихонова, Е. А. Ткаченко; под общей редакцией Е. М. Роговой. — Москва: Издательство Юрайт, 2020. — 383 с. — (Высшее образование). — ISBN 978-5-534-00436-6. — Текст: электронный // ЭБС Юрайт [сайт]. — URL: <https://urait.ru/bcode/449791> (дата обращения: 16.07.2023).
3. Проектное управление в органах власти: учебник и практикум для вузов / Н. С. Гегедюш [и др.] ; ответственный редактор Н. С. Гегедюш. — 2-е изд. — Москва: Издательство Юрайт, 2021. — 186 с. — (Высшее образование). — ISBN 978-5-534-12623-5. — Текст: электронный // ЭБС Юрайт [сайт]. — URL: <https://urait.ru/bcode/476653> ( (дата обращения: 16.07.2023).

### **4.4. Electronic educational resources**

An electronic educational resource on this discipline is under development.

#### **4.5. Лицензионное и свободно распространяемое программное обеспечение**

1. Microsoft Office (Word, Excel, PowerPoint) programmes

#### **4.6. Modern professional databases and information reference systems**

1. ATP "Consultant Plus: Non-commercial Internet version". - URL: <http://www.consultant.ru/online/> (date of access: 02/16/2023). – Access mode: free.

#### **5. Logistics**

1. Lecture audience.
2. Audience for practical training.
3. Computer class with Internet access.
4. Audience for group and individual consultations, current control and intermediate certification.
5. Audience for independent work.
6. Library, reading room.

#### **6. Guidelines**

##### **6.1. Methodological recommendations for the teacher on the organization of training**

This section of this work program is intended for novice teachers and practitioners with no previous teaching experience.

The discipline "Life cycle and planning of the project and programs in professional activity" forms the competence of the students of UK-2 and GPC-1. Under the conditions of designing educational systems on the principles of the competence-based approach, there has been a conceptual change in the role of the teacher, who, along with the traditional role of a knowledge carrier, performs the function of an organizer of the student's research work, a consultant in the procedures for selecting, processing and interpreting information necessary for practical action and further development, which must be taken into account when conducting lectures and practical classes in the discipline "Life cycle and project and program planning in professional activities".

The teaching of theoretical (lecture) material in the discipline "Life cycle and project and program planning in professional activities" is carried out on the basis of interdisciplinary integration and clear interdisciplinary links within the framework of the educational program and curriculum.

The detailed content of individual topics of the discipline "Life cycle and project and program planning in professional activities" is considered in clause 3.3 of the work program.

Approximate options for tasks and test tasks for current control and a list of questions for the exam in the discipline are presented as part of the FOS for the discipline in clause 7 of this work program.

The list of basic and additional literature, databases and information reference systems necessary in the course of teaching the discipline "Life cycle and project and program planning in professional activity" is given in clause 4 of this work program.

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

Obtaining in-depth knowledge of the discipline is achieved through the active independent work of students. It is advisable to use the allocated hours for getting acquainted with the

educational and scientific literature on the problems of the discipline, the analysis of scientific concepts.

Within the framework of the discipline, various forms of monitoring the level of achievement by students of the declared indicators of mastering competencies are provided.

Forms of current control - the activity of work in practical classes, testing.

The form of intermediate control in the discipline is an exam, during which the level of achievement by students of the declared indicators of mastering competencies is assessed.

Guidelines for mastering the discipline.

Lectures are held in accordance with the content of this work program and represent a presentation of the theoretical foundations of the discipline.

Lecture attendance is mandatory.

Note-taking of lecture material is allowed both in writing and by computer.

Regular repetition of the material of lecture notes for each section in preparation for the current forms of certification in the discipline is one of the most important types of independent work of the student during the semester, which is necessary for high-quality preparation for the intermediate certification in the discipline.

Conducting practical classes in the discipline "Life cycle and planning of a project and programs in professional activities" is carried out in the following forms:

- a survey based on the materials discussed at the lectures and studied independently according to the recommended literature;

- analysis and discussion of issues on topics, problem solving.

Attendance at practical classes and active participation in them is mandatory.

Preparation for practical classes necessarily includes the study of abstracts of lecture material and recommended literature for an adequate understanding of the conditions and method of performing tasks planned by the teacher for a particular practical lesson.

Guidelines for the implementation of various forms of extracurricular independent work

The study of basic and additional literature on the discipline is carried out on a regular basis in the context of each topic in order to prepare for the intermediate certification in the discipline "Life cycle and planning of a project and programs in professional activities." The list of basic and additional literature on the discipline is given in paragraph 4 of this work program.

Guidelines for preparing for interim certification

Intermediate certification in the discipline "Life cycle and project and program planning in professional activities" takes the form of an exam. An approximate list of questions for the exam in the discipline "Life cycle and project and program planning in professional activities" and the criteria for evaluating the student's answer for the purpose of assessing the achievement of the stated indicators of the formation of competence are given in the FOS for the discipline in clause 7 of this work program.

The student is allowed to interim certification in the discipline, regardless of the results of the current monitoring of progress.

## 7. Fund of evaluation funds

### 7.1. Methods for monitoring and evaluating learning outcomes

Code and name of competencies	Competence achievement indicators	Methods of control and evaluation
<p>UK-2. Able to determine the range of tasks within the set goal and choose the best ways to solve them, based on current legal regulations, available resources and restrictions</p> <p>OPK-1. Able to apply knowledge (at an intermediate level) of economic theory in solving applied problems</p>	<p>IUK-2.1. Formulates a set of tasks within the framework of the project goal, the solution of which ensures its achievement</p> <p>IUK-2.2. Identifies the links between the tasks set, the main components of the project and the expected results of its implementation</p> <p>IUK-2.3. Selects the best methods for planning, distributing areas of responsibility, solving problems, analyzing results, taking into account current legal regulations, available conditions, resources and restrictions, and opportunities for use</p> <p>IPOC 1.1 -Applies knowledge (at an intermediate level) of economic theory in solving applied problems, interpreting the results obtained</p> <p>IOPC 1.2-Applies knowledge of economic laws to analyze and model the real economic situation</p>	<p>Intermediate certification: exam</p> <p>Current control: questioning and solving problems in practical classes; testing</p>

## 7.2. Scale and criteria for evaluating learning outcomes

### 7.2.1. Exam Response Evaluation Criteria

(formation of competence of UK-2 and GPC-1, indicators IUK-2.1 IUK-2.2, IUK-2.3, IOPC-1.1, IOPC-1.2)

"5" (excellent): the student demonstrates excellent theoretical knowledge, practical skills, owns terms, draws reasoned conclusions and generalizations, gives examples, shows fluency in monologue speech and the ability to quickly respond to clarifying questions.

"4" (good): the student demonstrates good theoretical knowledge, practical skills, owns terms, draws reasoned conclusions and generalizations, gives examples, shows fluency in monologue speech, but at the same time makes minor mistakes that he quickly corrects on his own or with minor correction by the teacher.

"3" (satisfactory): the student demonstrates satisfactory theoretical knowledge, shows poorly formed skills in analyzing phenomena and processes, lacks the ability to draw reasoned conclusions and give examples, shows insufficient fluency in monologue speech, terms, logic and consistency of presentation, makes mistakes that can be corrected only with correction by the teacher.

"2" (unsatisfactory): the student demonstrates ignorance of the theoretical foundations of the subject, lack of practical skills, is unable to draw reasoned conclusions and give examples, shows poor command of monologue speech, does not know the terms, shows a lack of logic and consistency of presentation, makes mistakes that he cannot correct when corrected by the teacher, refuses to answer additional questions.

### 7.2.2. Criteria for evaluating the work of a student in practical classes

(formation of competence of UK-2 and GPC-1, indicators IUK-2.1 IUK-2.2, IUK-2.3, IOPC-1.1, IOPC-1.2)

"5" (excellent): all the tasks provided for by the practical training plan were completed, the student answered all control questions clearly and without errors, actively worked in practical classes.

"4" (good): all the tasks provided for by the plan of practical classes were completed, the student answered all the control questions with corrective comments from the teacher, worked quite actively in practical classes.

"3" (satisfactory): all the tasks provided for by the plan of practical classes were completed, with the comments of the teacher; The student answered all control questions with comments.

"2" (unsatisfactory): the student did not complete or performed incorrectly the practical tasks provided for by the practical lesson plan; the student answered the control questions with errors or did not answer the control questions.

### **7.2.3. Criteria for evaluating test results**

(formation of competence of UK-2 and GPC-1, indicators IUK-2.1 IUK-2.2, IUK-2.3, IOPC-1.1, IOPC-1.2)

Testing is evaluated according to the percentage of correct answers given by the student to the test questions.

The standard scale for the compliance of test results with the given score:

- "excellent" - over 85% of correct answers;
- "good" - from 70.1% to 85% of correct answers;
- "satisfactory" - from 55.1% to 70% of correct answers;
- from 0 to 55% of correct answers - "unsatisfactory"

"5" (excellent): the test-taker demonstrates excellent theoretical knowledge, masters the terms and has the ability to quickly respond to test questions.

"4" (good): the test-taker demonstrates good theoretical knowledge, knows most of the terms and has the ability to quickly respond to test questions.

"3" (satisfactory): the test-taker demonstrates satisfactory theoretical knowledge, owns basic terms and concepts.

"2" (unsatisfactory): the test subject has no theoretical knowledge, he does not know the terminology and reacts slowly to the test questions.

## **7.3. Evaluation tools**

### **7.3.1. Assessment**

(formation of competence of UK-2 and GPC-1, indicators IUK-2.1 IUK-2.2, IUK-2.3, IOPC-1.1, IOPC-1.2)

Examples of tasks in practical classes:

Topic 1. Fundamentals of the life cycle of the project and programs in professional activities  
Exercise. Levels of project management. Analysis of articles from periodicals on the problems of project management. (Prima Ya. G. Trends in the development of project management in Russia // ESGI. -2018.- No. 2 (18)., Valootsky V.I. Improvement of project management in Russia // Issues of Management. -2017. -No. 6 (49)., Belikova E.O. P. Project office in design - oriented organizations // Success in chemistry and chemical technology. -2017. -No. 14 (195).

Control questions:

1. Describe the main stages in the development of the theory and practice of project management in our country and abroad.
2. Name the features of the project, which are universal and characters for any project.
3. What do the project and current operations have in common and how do they differ?
4. Give as an example any project and give it a description in accordance with various classification criteria.
5. What is the purpose of project management standards?

6. Describe the three groups of international standards in the field of project management.

Topic 2. Models of the life cycle of the project and programs in professional activities

Exercise.

1. Determine the composition of teams of 5-7 people.

2. Team work to determine the theme of the project in accordance with the following areas specified in Appendix 2 to the work program of the course "Fundamentals of project management":

1. Career guidance projects for schoolchildren a. projects for specific faculties, b. project "Enter MosPolytech".

2. Socially oriented projects for various categories of socially unprotected categories of the population

a. projects for working youth,

b. projects for pensioners

c. projects for persons with disabilities,

d. projects for difficult teenagers.

3. Projects in the field of social entrepreneurship.

4. Technology Entrepreneurship Projects a. including those involving access to crowdfunding platforms.

5. Projects in the field of adaptation of first-year students in the university: a. media projects (media, information special projects, films, online shows, video blogs, etc.), b. spatial solutions.

6. University-wide student events and projects aimed at developing the corporate culture of the university and student communities, including projects a. cultural, b. leisure, c. sports events.

7. Additional educational programs for youth.

8. University brand book.

9. Volunteering projects a. historical and cultural, b. ecological, c. event-driven.

10. Projects for individual municipalities (within the listed topics).

11. Free theme.

3. Formulation of the problem, the solution of which will be devoted to the project. Control questions:

1. Regulation "On grant support for youth initiatives".

2. Intra-institutional / intra-faculty competition "Project Start".

3. Passport of the project.

4. Project reporting.

Topic 3. Standards for the life cycle of the project and programs in professional activities.

Exercise. Formulation of the goal and implementation of decomposition. Definition of project objectives. Control questions:

1. What criteria should the project objectives meet?

2. What is the role of lower level goals in the goal tree?

3. Describe the main groups of project constraints.

4. Describe the phases of the project life cycle.

5. Name the processes that each phase of the project includes.

6. List the factors that form the remote environment of the project.

7. Describe the influence of the near environment on the project.

8. Name the main stakeholders of the project.

9. What are the main possible participants of the project?

10. What are the differences in the project management functions of the project manager and curator?

11. What is the purpose of organizing stakeholder management.

Topic 4. Planning the life cycle of a project and programs in professional activities

Exercise.

1. Testing according to the method of determining Belbin's team roles, the type of temperament according to Belov.

2. Select a communication channel for the interaction of project participants. Control questions:

1. Describe the importance of leadership in project management.
2. Who is a leader?
3. Who is a project manager?
4. Team: concept, roles, stages of formation.
5. Describe personality types and their impact on the team role.
6. List the main techniques for determining team roles.

Topic 5. Resource management in the life cycle of the project and programs in professional activities

Exercise. 1. Solution of the cases "Resource and cost planning for the construction of a playground", "Cost planning for a car wash construction project" (see 112-113 Bely E.M. Project management (with a workshop): Textbook / E.M. Bely. - M.: Knorus, 2019. - 262 p.).

2. Draw up a project budget for the selected topic.

Control questions:

1. What are the main sources nicknames for project financing?
2. Name the advantages and disadvantages of using own and borrowed funds.
3. List the advantages and disadvantages of equity project financing.
4. What forms of credit financing of projects do you know?
5. What is the role of leasing in project financing?
6. How are projects financed from budgetary sources?

Topic 6. Project and program planning technologies in professional activities

Exercise. Draw up a calendar plan for the implementation of the project by a group of students (project participants) on the selected project topic.

Control questions:

1. What are the main tasks of project planning?
2. Describe the process of planning the scope of the project.
3. List the principles for the formation of a hierarchical structure of work.
4. Specify the main scheduling tasks.
5. How can project duration be shortened?
6. What graphical scheduling methods do you know?
7. Name the forms of project financing.

Topic 7. Risks in the life cycle of the project and programs in professional activities

Exercise. Identify risks and ways to manage risks. Fill in the paragraph of the project passport "Expected results of the project" and describe what changes will occur as a result of the project. List qualitative and quantitative results, measurable indicators.

Exercise. Prepare a presentation of the project passport (outlining the main points) within the framework of the intra-institutional / intra-faculty competition "Project Start".

Control questions:

1. Describe the main groups of project execution processes.
2. Name the main functions of the project control system.
3. What are the main objects of control in the project?
4. The process of making a decision on making changes to the project.
5. How is the change management process carried out?
6. Appointment of project closing processes.
7. What is the name of the final document of the project?
8. What is the process of creating a project archive?
9. Describe the procedure for closing the project contract.
10. What is the difference between risk and uncertainty.
11. What risk response methods do companies use?

"Project start".



Control questions:

1. Name the main types of project efficiency.
2. Describe the methods for assessing the economic efficiency of projects.
3. What methods of assessing the economic efficiency of the project do you know?
4. Why is it necessary to discount cash flows when evaluating the economic efficiency of a project?
5. What sources of project financing do you know?
6. What are the advantages and disadvantages of using own and borrowed funds?
7. What projects, in your opinion, can be financed from budgetary sources?
8. What are the specific features of project financing?
9. What are the forms of project financing?

Topic 8. Evaluation of the effectiveness and financing of the project. Content elements of project management in professional activities

Task: Pre-defense of the project passport (presentation of the project with a statement of the main points) within the framework of the intra-institutional / intra-faculty competition

Topic 9. Interaction of project teams.

Exercise. Protection of the project passport (presentation of the project with a statement of the main points) within the framework of the intra-institutional / intra-faculty competition "Project Start".

Control questions:

1. What types of project organizational structures do you know?
2. Formulate the conditions for successful interaction between project teams.
3. Describe the advantages and disadvantages of using a matrix structure in project management.
4. Describe the advantages and disadvantages of using a network structure in project management.
5. Describe the advantages and disadvantages of using a project structure in project management.
6. Describe the stages of the team's life cycle.
7. List the conditions and threats that provoke the "split" of the team.

Questions for the exam

1. Project: the concept and characteristics of the features of the project
2. Classification of projects
3. Project management: the concept and characteristics of the main limitations
4. Classification of project management processes
5. Define project management and name the stages of its development
6. History and prospects for the development of project management
7. Relationship and Distinctions: Project Management and Functional Management
8. Project structuring: concept and essence
9. Organizational structures of project management: concept, essence, principles of construction
10. Characteristics of the types of organizational structure of project management, depending on the system of relationships between project participants
11. Varieties of functional design structures and their characteristics
12. Varieties of matrix design structures and their characteristics
13. Varieties of project-target structures and their characteristics
14. Characteristics of the external environment of the project
15. Comparative characteristics of the mechanistic and organic structures of the project
16. Main participants of the project
17. Project managers: types and functionality

18. Main Main reasons for the emergence of projects
19. Expert evaluation of options for investment decisions
20. Financial models for project selection
21. Project financing: concept, forms, advantages and disadvantages
22. Characteristics of the declaration of intent
23. Project office: concept and types
24. Basic principles of design and composition of the project office
25. Types of engineering firms and their choice
26. Structuring project work: concept, essence, principles
27. Detailed project planning: concept, stages, methods
28. Tabular, matrix forms of representation of the network model of project planning. Gantt chart.
29. Calendar planning: concepts and essence.
30. Resource planning: concept, types of resources, presentation of distribution and leveling of resources.
31. Documenting the project plan.
32. Project Cost Management Processes
33. Technology and types of project cost estimation
34. Types of costs in assessing the cost of the project
35. Cost management plan and project estimates
36. Budget design
37. Traditional method of project cost control
38. Project cost control by earned value method
39. Reporting indicators at the project planning stage and at the implementation stage
40. Changes in Project Cost Management
41. The main characteristics of the team and the reasons for its formation
42. Types of project teams 43. Professional composition of the team and their main functions in project management
44. Types of joint activities in a team and their characteristics
45. Basic principles of personnel management of the project team 46. Efficiency of the project team
1. Characteristics of the essence of project risk management
2. Classification of risk factors (causes)
3. Characteristics of types of risks
4. Types of losses from the occurrence of risky events
5. Project risk management methods
6. Project risk analysis method
7. Methods for reducing project risks
8. Risk management process during the life cycle of the project
9. Project implementation control: concept, principles and methods of implementation
10. Change management during project implementation
11. Goals and stages of completion of the project
12. Project performance indicators