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ФИО: Максимов Алексей Борисович
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MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION

Federal State Autonomous Educational Institution of Higher Education

"Moscow Polytechnic University"

APPROVE
Vice-President
for International Affairs
_____ /Yu.D. Davydova/
"27" февраля 2025

Dean of the Faculty
of Economics and Management
_____ /A.V. Nazarenko/
"27" февраля 2025

WORKING PROGRAM OF THE DISCIPLINE

"Project Management"

Field of study
38.03.02 Management

Educational program (profile)
"Business Process Management"

Qualification (degree)
Bachelor

Form of study
Part-time

Moscow 2025

Developers:

Head of the Central Operations Center /I.S.Petukhov/

Associate Professor /Yu.S.Kudryavtseva/

Associate Professor /I.V.Gulina/

Agreed:

Head of the Department of Management,
Ph.D., Associate Professor /E.E. Alenina/

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1 List of planned learning outcomes in the discipline, correlated with the planned results of mastering the educational program

This program of the academic discipline “Project Management” establishes the necessary requirements for the knowledge and skills of students to work in a team, including for effective integration into the project team, meeting project deadlines and obtaining the required results.

The program was developed for the training direction 38.03.02 “Management”, profile “Business Process Management” in accordance with:

- Federal State Educational Standards FSES3++;
- Educational programs of higher education;
- Working curricula for 2025 start of preparation.

Goals of the discipline

The purpose of mastering the discipline “Project Management” is to study and master by students the theoretical foundations and practical skills in the field of project management to form ideas about project activities (from the inception of an idea to the implementation of a project) as an integral system, all elements of which are interdependent. Possession of theoretical foundations and practical skills in the field of project management are necessary for the successful development and implementation of innovative technologies that determine industrial development and management, the creation and implementation of innovative projects, professional personal growth and self-development, creative solutions to problems of current and strategic management: starting with personnel management and ending with the development of high technology.

Objectives of studying the discipline

The main objectives of studying the discipline:

– studying the basic methods and technologies of project management: creating a project concept, project team, project planning, implementation, etc.;

– study of the main technologies of project management: characteristics, methods of application, limitations, advantages, disadvantages, area of use (application), etc.;

– formation and development of theoretical knowledge and practical skills in the field of technical and social design and project management.

Training in the discipline “Project Management” is aimed at developing the following competencies in students:

Code and name of competencies	Indicators of Competency Achievement
UK-2. Able to determine the range of tasks within the framework of the set goal and choose the best ways to solve them, based on current legal norms, available resources and limitations	IUK-2.1. Formulates a set of tasks within the framework of the set goal of the project, the solution of which ensures its achievement IUK-2.2. Determines the connections between the assigned tasks, the main components of the project and the expected results of its implementation IUK-2.3. Selects the optimal methods of planning, distributing areas of responsibility, solving problems, analyzing results, taking into account current legal norms, existing conditions, resources and limitations, possibilities of use

2 Place of discipline in the structure of the educational program

Disciplineappliesto the part formed by participants in educational relations of cycle B.1.2.23.4 of the module “Projects and project activities”.

The discipline “Project Management” is studied in the 2nd semester of study in the direction of preparation 38.03.02 “Management”, profile “Business Process Management”.

The discipline is directly related to the following OOP disciplines and practices:

Introduction to project activities;
Introduction to the profession;
Fundamentals of Management;
Personnel management;
Educational practice (project-based).

3 Structure and content of the discipline

The total labor intensity (volume) of the “Project Management” discipline is 2 credit units.
The volume of discipline by type of training (in hours) is 72 hours.
The discipline is taught in full-time and part-time forms of study.
Type of intermediate certification (form of control): test.

3.1. Types of educational work and labor intensity

(according to forms of study)

Type of educational work	**Total hours**	**Semester**
		2
3.1.1 Part-time education		
Type of educational work	**Total hours**	**Semester**
		1
Classroom lessons (total)	**18**	**18**
Including:	-	-
Lectures	-	-
Practical exercises (PL)	18	18
Seminars (C)	-	-
Laboratory work (LR)	-	-
Independent work (total)	**54**	**54**
Including:	-	-
Preparation for practical classes	54	54
Type of intermediate certification - test	-	-
Total labor intensity hour / credit. units	**72/2**	**72/2**

3.2 Thematic plan for studying the discipline

(according to forms of study)

3.2.2 Part-time education

No. p/p	**Sections/topics disciplines**	**Labor intensity, hour**					
		Total	**Classroom work**				**Independent work**
			Lectures	Seminars/practical sessions	Laboratory exercises	Practical training	
1	Introduction.	5		1			4

No. p/p	Sections/topics disciplines	Labor intensity, hour					
		Total	Classroom work				Independent work
			Lectures	Seminars/practical sessions	Laboratory exercises	Practical training	
	Project management as a scientific discipline and practical field of activity						
2	Topic 1. What is a project? Main characteristics of the project	5	-	1	-	-	4
3	Topic 2. Development of a project concept, basic requirements for the concept, creative thinking	6	-	2	-	-	4
4	Topic 3. Basic principles of managing projects and project activities	6	-	2	-	-	4
5	Topic 4. Project business plan	6	-	2	-	-	4
6	Topic 5. Project organization	5	-	1	-	-	4
7	Topic 6. Project team	6		2			4
8	Topic 7. Project time management	5	-	1	-	-	4
9	Topic 8. Development and adoption of management decisions	5	-	1	-	-	4
10	Topic 9. Project risk management	5	-	1	-	-	4
eleven	Topic 10. Project life cycle	5	-	1	-	-	4
12	Topic 11. Completion of the project	5		1			4
13	Topic 12. Project marketing	5	-	1	-	-	4
14	Review practical lesson	3	-	1	-	-	2
	Test						
Total		**72**		**18**			**54**

3.3 Contents of the discipline

Introduction. Project management in materials science as a scientific discipline and practical field of activity.

Basic concepts of the discipline of project management. Project management and project activities in the modern world: significance for the development of the scientific and technical process and society, features of the organization of project activities, world experience. Features of the use of project-based learning in the field of higher engineering education and the impact of project-based learning on professional competitiveness. What is a project? Main characteristics of the project. Project as an object of management.

Topic 1. What is a project? Main characteristics of the project.

Classification of projects, signs of classification of projects. Goals for creating projects. History of the development of Project Management in radio engineering. Project as an object of management. Project management methodology.

Topic 2. Development of a project concept, basic requirements for the concept, creative thinking.

The project as a way to satisfy the social needs of society. Project idea: formalization of ideas, alternatives, selection parameters. Key idea

Topic 3. Basic principles of organizing the process of managing projects and project activities.
Project as a system (project map, project passport, project structure). Aerobatic project

Topic 4. Business plan of the project.
Requirements for the content of a business plan, types of business plan. Main sections and their characteristics. Assessing the attractiveness of a business plan for investors.

Topic 5. Organization of the project.
Organization of project activities. Assessment of resources and resource availability of the project. External project environment. Stakeholders. Internal environment of the project, formation and management of the internal environment of the project.

Topic 6. Project team.
Basic patterns of project team formation, social roles. Requirements for the competence of team members. Life cycle of a project team. Organizational culture of the project.

Topic 7. Project time management.
Project time management is mtime management techniques. For the student – techniques of self-organization and self-management. Time management helps a person or company plan time and save resources. The more conceived and clearly planned we manage to do, the higher the quality of our work and life.
Basic technologies of time planning and management. Time as one of the main resources of the project. Project time limits, Gantt chart.

Topic 8. Development and adoption of management decisions.
Management decisioninvolves a comparative assessment of a number of alternative options and the selection of the optimal one that best suits the interests of the project.Development and adoption of management decisions in the process of development and implementation of the project. Types (classification) of management decisions, basic technologies for making management decisions. Methods for assessing the effectiveness of management decisions.

Topic 9. Project risk management.
Project risk portfolio and its formation. Acceptable/unacceptable risk indicators. Project risk assessment and modern project risk management technologies. Impact of risks on the project implementation process (cost, resources, etc.) Classification of investment risks.Management of riskswhen investing.

Topic 10. Project life cycle.
The project life cycle isthe sequence of stages through which projects pass from initiation to completion, regardless of their specifics. A clear understanding of these phases allows managers and executives to control projects as effectively as possible.The main stages of the project life cycle, their characteristics and functions. Project life cycle management.

Topic 11. Completion of the project.
Completion of the project: main patterns and stages. Project effectiveness assessment. Social and economic effect from the project implementation.

Topic 12. Project marketing.

Marketing support of the project and six components: marketing research; development of marketing strategy; formation of a marketing concept; project marketing program; project marketing budget; implementation of project marketing activities.

3.4 Topics of seminars/practical and laboratory classes

3.4.1 Seminars/practical sessions

3.4.1.1 Seminar/practical lesson 1 on the topic Introduction. Project management in materials science as a scientific discipline and practical field of activity.

Presentation of the teacher, checking the suitability of the study group and the number of students in it. Formation of final lists of students with email. postal addresses. Discussion:

- format of individual and collective educational tasks;
- topics of abstracts/essays on the discipline “Project Management”;
- organizing and conducting ongoing monitoring of students’ knowledge in the form of a survey.

Choosing the topic of an abstract/essay, which is a brief written presentation of the results of a theoretical analysis of a certain scientific (educational and research) topic, where the listener reveals the essence of the problem under study, gives various points of view, as well as his own views on it.

Clarification of the topics of abstracts and speakers for lesson 2.

3.4.1.2 Seminar/practical lesson 2 on topic 1. What is a project? Main characteristics of the project.

Discussion of the concept of a project, goals and objectives of project management; project stages and their implementation. Study of existing international and Russian project management associations.International and national project management standards.

Organizing and conducting ongoing monitoring of students’ knowledge in the form of a survey. Listening to abstracts on the topic of the lesson. Clarification of the topics of abstracts and speakers for lesson 3.

3.4.1.3 Seminar/practical lesson 3 for topic 2. Development of a project concept, basic requirements for the concept, creative thinking.

Discussion of the project concept. Study of the basic requirements for the concept.Requirements for its content.Development of the concept of a conditional project.

Organizing and conducting ongoing monitoring of students’ knowledge in the form of a survey. Listening to abstracts on the topic of the lesson. Clarification of the topics of abstracts and speakers for lesson 4.

3.4.1.4 Seminar/practical lesson 4 on topic 3. Basic principles of project management and project activities.

Discussion of the term “project activity”, identification of patterns in project management. What is itlife cycle of the project: its phases and stages. Features of project life cycle management. Parameters and characteristics of design work. Project management models and strategies.

Organizing and conducting ongoing monitoring of students’ knowledge in the form of a survey. Listening to abstracts on the topic of the lesson. Clarification of the topics of abstracts and speakers for lesson 5.

3.4.1.5 Seminar/practical lesson 5 for topic 4. Project business plan.

Discussion of the concept of a business plan for a project.Project planning processes and levels.Relationship fproject management functions and business plan. Process approach to project management. Principles of effective project management. Business plan and sequence of project management stages.

Organizing and conducting ongoing monitoring of students' knowledge in the form of a survey. Listening to abstracts on the topic of the lesson. Clarification of the topics of abstracts and speakers for lesson 6.

3.4.1.6 Seminar/practical lesson 6 for topic 5. Organization of the project.

Discussion of the concept of project organization.Project analysis: structure and composition. Criteria for evaluation and selection of the project. Development of the mission, goals and objectives of the project. Rules for constructing a goal tree. Resource support for the project: requirements for it.

Organizing and conducting ongoing monitoring of students' knowledge in the form of a survey. Listening to abstracts on the topic of the lesson. Clarification of the topics of abstracts and speakers for lesson 7.

3.4.1.7 Seminar/practical lesson 7 for topic 6. Project team.

Basic principles of forming a project team. Basic patterns of team development. Team communication management.

Organizing and conducting ongoing monitoring of students' knowledge in the form of a survey. Listening to abstracts on the topic of the lesson. Clarification of the topics of abstracts and speakers for lesson 8.

3.4.1.8 Seminar/practical lesson 8 for topic 7. Project time management.

Discussion of the concept of project time management as mtime management method. For the student - as a technique for self-organization and self-management. Time planning and saving resources in project management.

Organizing and conducting ongoing monitoring of students' knowledge in the form of a survey. Listening to abstracts on the topic of the lesson. Clarification of the topics of abstracts and speakers for lesson 9.

3.4.1.9 Seminar/practical lesson 9 for topic 8. Development and adoption of management decisions.

Discussion of a management decision based on break-even analysis and the possibility of its adoption in project management. Break even. Discussion of assortment planning and analysis of assortment policy. Making pricing decisions. Discussion of operational and long-term tasks in the project.

Organizing and conducting ongoing monitoring of students' knowledge in the form of a survey. Listening to abstracts on the topic of the lesson. Clarification of the topics of abstracts and speakers for lesson 10.

3.4.1.10 Seminar/practical lesson 10 for topic 9. Project risk management.

Discussion pclaim management of the project asan ongoing process whose goal is to identify and prevent risks or minimize their consequences for the project.Discussion of investment risk asthe possibility of partial or complete loss by the investor of his own investments. Discussion ndiversifiable (systemic) risks: market, risk of changes in interest rates, currency, inflationary political. Discussion of diversifiable (non-systemic) risks: business, financial, operational. Discussion of methods for assessing investment risks: expert method, method of analysis, method of analogies, method of quantitative assessment.

Organizing and conducting ongoing monitoring of students' knowledge in the form of a survey. Listening to abstracts on the topic of the lesson. Clarification of the topics of abstracts and speakers for lesson 10.

3.4.1.11 Seminar/practical lesson 11 for topic 10. Project life cycle.

Discussion of the project life cycle. The project life cycle helps: improve communication between the team and customers; be confident that the goal is achievable with the available resources;manage risksand minimize them. Discussion of the phases of the project life cycle: initiation, planning, execution, control, completion.

Organizing and conducting ongoing monitoring of students' knowledge in the form of a survey. Listening to abstracts on the topic of the lesson. Clarification of the topics of abstracts and speakers for lesson 11.

3.4.1.12 Seminar/practical lesson 12 for topic 11. Completion of the project.

Discussion of project completion as the final stage of its life cycle,the result of which is confirmation and documentationcompletionall worksprojectand final resolution of all controversial issues between interested partiesproject. Discussion of project closure scenarios:

– natural completion of the project (occurs when the project achieves its final goals and closes naturally on time);

– unnatural completion of the project (occurs when the project reaches premature completion for various reasons: financial; changes in the market situation; miscalculations during planning and during the implementation of the project; the emergence of conditions that make the implementation of the project useless for the investor).

Discussion of the project completion algorithm. Discussion of measuring the assessment of the social significance of the project.

Listening to abstracts on the topic of the lesson. Clarification of the topics of abstracts and speakers for lesson 12.

3.4.1.13 Seminar/practical lesson 13 for topic 12. Project marketing.

Discussion of external and internal marketing of the project. Let's consider marketing in two aspects: the content of the project's marketing and the implementation of marketing at various stages of its life cycle. Discussion of the six components of marketing: marketing research; development of marketing strategy; formation of a marketing concept; project marketing program; project marketing budget; implementation of project marketing activities. Product life cycle model as one of the important elements of the project concept.

Listening to abstracts on the topic of the lesson.

3.4.1.14 Seminar/practical session 14. Review practical session.

Review practical lesson: project as an object of management. Organizing and conducting ongoing monitoring of students' knowledge in the form of a survey.

3.4.2 Laboratory exercises

(The topics of classes are indicated with a list of laboratory works)

There are no laboratory classes planned.

3.5 Subjects of course projects (coursework)

Course projects (coursework) are not planned.

4 Educational, methodological and information support

4.1 Regulatory documents and GOSTs

Regulatory documents and GOSTs are not used when studying the discipline. When studying the discipline, students can, if necessary, use industry regulations and GOSTs.

4.2 Main literature

1. Verzukh, E. Project management: a crash course in the MBA program / E. Verzukh. - M.: Dialectics, 2019. - 480 p.
2. Balashov, A.I. Project management: Textbook and workshop for academic bachelor's degree / A.I. Balashov, E.M. Rogova, M.V. Tikhonova and others - Lyubertsy: Yurayt, 2016.- 383c.
3. Zub, A.T. Project management: Textbook and workshop for academic bachelor's degree / A.T. Tooth. - Lyubertsy: Yurayt, 2016. - 422 p.

4.3 Additional literature

1. Business. Complete encyclopedia. – M.: Eksmo, 2012.
2. Business Encyclopedia / Ed. R. Golov. – M.: Dashkov and Co., 2012.
3. Small business: textbook / ed. V.Ya. Gorfinkel. – M.: KNORUS, 2009.
4. Entrepreneurship: textbook / ed. V.Ya. Gorfinkel, G.B. Polyaka, V.A. Shvandara. – 4th ed.; reworked and additional – M.: UNITY-DANA, 2007.
5. Entrepreneurship: textbook / ed. V.Ya.Gorfinkel, G.B.Polyak. – 5th ed.; reworked and additional – M.: UNITY-DANA, 2009.
6. Newton, R. Project management from A to Z / R. Newton. - M.: Alpina Publisher, 2018. - 180 p.

4.4 Electronic educational resources

An electronic educational resource on the discipline is under development.

4.5 Licensed and freely distributed software

1. Microsoft Office package programs (Word, Excel, PowerPoint)

4.6 Modern professional databases and information reference systems

1. ATP “ConsultantPlus: Non-commercial Internet version”. - URL:http://www.consultant.ru/online/
2. Official website of the Federal State Statistics Service (Rosstat)http://www.gks.ru
3. Rosbusinessconsultinghttp://www.rbk.ru
4. Ministry of Natural Resources and Ecology of the Russian Federation.http://www.mnr.gov.ru
5. Institute for Demographic Researchhttp://www.demographia.ru
6. Public administration. Electronic newsletter". URL:http://ejournal.spa.msu.ru
7. Forecasts and forecastingwww.prognoz.org,www.ecfor.ru
8. www.aup.ru/books/i002.htm– administrative and management portal.
9. www.akeu.ru– Association of Economics and Management Consultants.

5 Logistics support

1. Auditorium for practical classes.
2. Interactive board.
3. Computer class with Internet access.
4. Audience for group and individual consultations, ongoing monitoring and intermediate certification.
5. Audience for independent work.
6. Library, reading room.

6 Guidelines

6.1 Guidelines for teachers on organizing training

This section of this work program is intended for beginning teachers and practitioners who do not have teaching experience.

The discipline “Project Management” is a discipline of the RUP part, formed by participants in the educational relations cycle B.1.2.23.4 of the module “Projects and Project Activities” and ensures the formation of competence in the field of preparation 38.03.02 “Management” profile “Business Process Management”.

In the process of mastering the course topics, the teacher should pay special attention to the issues of developing an understanding of the norms of project activity.

When studying the discipline, it is necessary to ensure that students understand the essence of project activity and practical mastery of the methodology for developing an innovative idea to the level of a scalable business.

Theoretical study of the main issues of the sections of the discipline should be reinforced by active practical work within the framework of the discipline “Project Management”.

To activate the educational process when studying a discipline, it is effective to useongoing monitoring of students' knowledge in the form of a survey, as well as listening to abstracts on the topic of the lesson.

In the conditions of designing educational systems on the principles of the competency-based approach, there has been a conceptual change in the role of the teacher, who, along with the traditional role of a knowledge bearer, performs the function of an organizer of student 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 practical classes in the discipline “Project Management”.

The detailed content of individual sections of the discipline “Project Management” is discussed in paragraph 3.3 of the work program.

The topics of practical classes in sections of the discipline and types of classes are reflected in paragraph 3.4 of the work program. Conducting practical classes is focused on:

- study of specialized literature and popular periodicals;
- specialized information sites;
- formation of a scientifically based understanding of the project management features of modern students;
- setting goals, defining tasks, planning the expected result upon completion of the project;
- project marketing.

Clause 3.3 indicates the thematic content of the discipline. Section 3.4 indicates seminar/practical and laboratory classes. The list of basic and additional literature and news information sites required during the teaching of the discipline “Project Management” is given in paragraph 4 of this work program. The teacher should guide students to use modern scientific literature when preparing for seminars/practical classes in the discipline.

The funds of assessment tools for ongoing monitoring and intermediate certification of the student are given in paragraph 7 of the work program, taking into account the competency-based approach in the process of implementing the EP.

Assessment of forms of ongoing control and intermediate certification provides for preparation for testing on the questions proposed in clause 7.3.

6.2Guidelines for students on mastering the discipline

Obtaining in-depth knowledge in the discipline is achieved through active independent work of students. It is advisable to use the allocated hours to get acquainted with educational and scientific literature on the problems of the discipline, and analyze scientific concepts.

Within the discipline, various forms of monitoring the level of students’ achievement of the stated indicators of mastering competencies are provided.

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

The form of intermediate control in the discipline is a test during which the level of students' achievement of the stated indicators of mastering competencies is assessed.

6.2.1 Guidelines for mastering the discipline.

Seminars/practical sessionsare carried out in accordance with the content of this work program in an offline format. Attendance at seminars/practicums is mandatory.

Conducting seminars/practical classes in the discipline "Project Management" is carried out in the following forms:

- a survey based on materials discussed in lectures and studied independently using recommended literature;
- analysis and discussion of issues on the topic of the lesson;
- abstract/essay submission;
- a short presentation on the topic of the abstract/essay and answers to questions.

Active participation in seminars/practicums is mandatory.

Preparation for practical classes necessarily includes studying the notes of lecture material and recommended literature for an adequate understanding of the conditions and method of completing the tasks planned by the teacher for a specific practical lesson.

6.2.2 Guidelines for extracurricular independent work.

Independent work is the main type of work to master the theoretical materials of the course and acquire work skills during the time free from compulsory training sessions. theoretical material and acquisition of the required skills within the framework of the The goal of independent work is the practical acquisition of competencies by students.

The student's independent work on mastering educational material in an academic discipline can be done in the University library, classrooms, computer classes, and also at home. The content and amount of student's independent work is determined by the discipline's curriculum, teaching materials, practical assignments and instructions from the teacher.

Study of basic and additional literaturein the discipline is carried out on a regular basis in the context of each topic to prepare for the intermediate certification in the discipline "Project Management". The list of basic and additional literature on the discipline is given in paragraph 4 of this work program.

Preparation for practical training.Practical classes allow students to develop creative theoretical thinking, the ability to independently study literature, and analyze practice; They teach you to clearly formulate a thought and conduct a discussion, that is, they are extremely important in the development of independent thinking.

Preparation for a practical lesson includes two stages. At the first stage, the student plans his independent work, which includes: understanding the task for independent work; selection of basic and additional literature; drawing up a work plan that identifies the main points of upcoming preparation. Drawing up a plan disciplines and increases organization in work.

The second stage includes direct preparation for the lesson, which begins with studying basic and additional literature. In this case, special attention must be paid to the content of the main provisions and conclusions, explanation of phenomena and facts, clarification of the practical application of the theoretical issues under consideration. Next, you should prepare abstracts for speeches on all educational issues presented in a practical lesson or on the topic of an essay presented in a lesson, think through examples in order to ensure a close connection of the topic being studied with real life.

When preparing to perform as part of a practical lesson, you should seek help from your teacher if necessary.

Guidelines for preparing for intermediate certification

Interim certification in the discipline “Project Management” takes place in the form of a test. An approximate list of questions for the test in the discipline “Project Management” and criteria for assessing the student’s answer for the purpose of assessing the achievement of the declared indicators of competence development are given in the Federal State Educational Standard 3++ for the discipline in paragraph 7 of this work program.

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

6.2.3 Features of the implementation of discipline for people with disabilities and people with limited health capabilities

Training in the discipline “Project Management” for disabled people and persons with limited health capabilities (hereinafter referred to as HHI) is carried out by the teacher, taking into account the characteristics of the psychophysical development, individual capabilities and health status of such students.

For students with impaired musculoskeletal function and hearing impairments, lectures and practical classes are provided with multimedia tools and handouts.

For students with visual impairments, the use of technical means to enhance residual vision is provided, and the possibility of developing audio materials is also provided.

In the discipline “Project Management”, training for people with disabilities can be carried out both in the classroom and using an electronic information and educational environment, an educational portal and e-mail.

7 Appraisal Fund

7.1 Methods for monitoring and assessing learning outcomes

Code and name of competencies	Indicators of Competency Achievement	Methods of control and evaluation
UK-2. Able to determine the range of tasks within the framework of the set goal and choose the best ways to solve them, based on current legal norms, available resources and limitations	IUC-2.1. Formulates a set of tasks within the framework of the set goal of the project, the solution of which ensures its achievement IUC-2.2. Determines the connections between the assigned tasks, the main components of the project and the expected results of its implementation IUC-2.3. Selects the optimal methods of planning, distributing areas of responsibility, solving problems, analyzing results, taking into account current legal norms, existing conditions, resources and limitations, possibilities of use	Interim certification: test Current control: - survey at seminars/ practical classes; - abstract/essay.

7.2 Scale and criteria for assessing learning outcomes

7.2.1 Criteria for assessing the answer to the test

(formation of competence UK-2, indicators IUC-2.1, IUC-2.2, IUC-2.3)

Interim certification of students in the form of a test is carried out based on the results of completing all types of academic work provided for by the curriculum in the discipline “Project Management”, 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 is carried out by the teacher leading classes in the discipline.

Based on the results of the intermediate certification for the discipline, a grade of “pass” or “fail” is assigned.

Grading scale	Description
Passed	All types of educational work provided for by the curriculum have been completed. The student is able to use methodological techniques for feasibility studies of design solutions; carry out financial and economic planning of the project; form connections between the assigned tasks, the main components of the project and the expected results of its implementation. 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. Competencies have been formed.
Uncredited	One or more types of educational work provided for by the curriculum have not been completed. The student does not demonstrate theoretical knowledge and is not able to use methodological techniques for the feasibility study of design solutions; does not know how to carry out financial and economic planning of the project; is not able to form connections between the assigned tasks, the main components of the project and the expected results of its implementation and is not able to quickly respond to clarifying questions, experiences significant difficulties in operating knowledge and skills when transferring them to new situations. Competencies have not been developed.

7.2.2. Criteria for assessing student work in practical classes

(formation of competence UK-2, indicators IUC-2.1, IUC-2.2, IUC-2.3)

"5" (excellent):the student actively participated in the discussion of the topic of the practical assignment provided for by the practical lesson plan; used methodological techniques for feasibility studies of design solutions; applied financial and economic planning of the project; determined the list and calculated technical and economic indicators. The student answered all the control questions clearly and without errors, worked actively in practical classes; presented an abstract and made a presentation on the chosen topic.

"4" (good):the student participated in the discussion of the topic of the practical assignment provided for in the practical lesson plan; the student, with corrective comments from the teacher, used methodological techniques for feasibility studies of design solutions; applied financial and economic planning of an engineering project; determined the list and calculated technical and economic indicators. The student answered all test questions and worked quite actively in practical classes; submitted an abstract but did not speak.

"3" (satisfactory):the student participated fragmentarily in the discussion of the topic of the practical assignment provided for by the practical lesson plan; the student, with corrective comments from the teacher, used methodological techniques for feasibility studies of design solutions; calculated technical and economic indicators; did not submit an abstract.

"2" (unsatisfactory):the student did not participate in the discussion of the practical assignment issues provided for in the practical lesson plan; the student did not use methodological

techniques for feasibility studies of design solutions; could not calculate technical and economic indicators; the student answered the test questions with errors or did not answer the test questions; did not submit an abstract.

7.2.3. Criteria for assessing test results

Testing in the "Project Management" discipline is not carried out.

7.3 Evaluation tools

7.3.1 Monitoring

(formation of competence UK-2, indicators IUC-2.1, IUC-2.2, IUC-2.3)

Sample list of questions for a seminar/practical lesson

1. The impact of project-based learning on professional competitiveness.
2. What is a pilot project?
3. What is the role of business planning in project management.
4. Stakeholders as participants in the external environment of project activities.
5. List the main principles of forming a project team.
6. What is the impact of risks on the project implementation process?
7. How the project life cycle is managed.
8. What is the social effect of the project?
9. How to use the Han chart in time management of project management.
10. Break-even analysis and the possibility of its application in project management.
11. How a strategy is developed and a project marketing budget is drawn up.
12. What is the economic effect of the project?
13. What is marketing support for a project?
14. What is a project? What is the historical aspect of project management?
15. What time management tools and methods do you know when performing specific tasks, projects, and achieving your goals?
16. What are the priorities of one's own activities, personal development and professional growth in project activities?
17. What is the assessment of the attractiveness of a business plan for investors?
18. How project activities are organized.
19. List the main principles of forming a project team.
20. What is the organizational culture of the project expressed in?
21. Name the main time planning technologies in project activities.
22. What is a project risk portfolio?
23. List the types of management decisions.
24. What operational management decisions do you know?
25. Name the main patterns and stages of project completion.
26. How is marketing support for the project implemented?

Sample abstract/essay topics

1. Project classification
2. Project management and project activities in the modern world
3. The project as a way to satisfy the social needs of society.
4. Priorities of own activities, personal development and professional growth in project activities.
5. Readiness to build a professional career and determine a strategy for professional development based on an assessment of the requirements of the labor market, offers of the educational services market and taking into account personal capabilities and preferences.
6. External and internal environment of the project: opportunities for formation and management.
7. Basic technologies for making management decisions
8. Promising management decisions and their implementation in project activities.
9. Life cycle of a project team.

10. Basic time planning technologies in project management.
11. Formation of a portfolio of project risks, their assessment and modern technologies for managing project risks.
12. The main stages of the project life cycle, their characteristics and functions.
13. Project life cycle management in practice.
14. Six components of marketing support for a project.
15. The project as a system, its structure and documentation: project map, project passport.
16. Business plan: types, contents, sections and characteristics.
17. The project team and the social roles of its participants.
18. Time as one of the main resources of the project.
19. Project time limits, Gantt chart.
20. Acceptable/unacceptable risk indicators and project risk assessment.
21. Assessing project efficiency: modern methods for calculating it.
22. Management decisions in the project management process.
23. Assortment planning and analysis of assortment policy in project management.
24. Making decisions on pricing as a component of management decisions.
25. Feasibility study of design solutions and technical specifications for the development of a radio engineering system from the point of view of technical and economic indicators.
26. Methodological techniques for feasibility study of design solutions.
27. Financial and economic planning of an engineering project.
28. Terms of reference for the development of a radio engineering system from the point of view of technical and economic indicators.

In agreement with the teacher, the student can propose his own abstract/essay topic.

Sample overview practical lesson (option 1):Place and role of project management science

1. Management is the process of influencing any object to achieve the required results. In modern cybernetics (the science of managing complex systems) there are four classes of control:

–in inanimate nature (technical systems);

–biological systems;–virtual systems

–social systems.

What are the similarities and differences between the management of these systems? Which of the above systems is the most difficult to manage and why?

2. Any control system is divided into two subsystems: control and controlled. To carry out management functions, the management subsystem must have the necessary resources (material, labor, financial) to ensure the implementation of management influences. At the same time, a management system implies the presence of a structure, organization and management mechanism. Rank them in order of importance.

What is the difference between these concepts? Which control element will be dominant for you? Give reasons for your point of view.

3. Effective management is based on a system of economic laws, patterns, principles and methods of management in market conditions. Explain the meaning and content of each of them.

Which of them seems to you to be decisive for achieving the set goals of project management: laws, patterns, principles or management methods?

4. To improve the quality of training of specialists in the field of project management (as in any other field), the organization of the educational process is of fundamental importance. Education has two goals: social and professional. The social goal is the reproduction of culture, the effective increase in the spiritual potential of the nation. The professional goal of education is to ensure the training of human resources and scientific and technical potential to increase the efficiency and competitiveness of Russian companies. An important principle for improving the educational process at Mospolitek is considered to be improving the quality of training for future bachelors in the field of training 03/38/02 “Management” profile “Business Process Management”.

What forms of training in the educational process do you consider the most appropriate and effective? Analyze the types of practical exercises that are most likely to evoke in students a desire to activate their thinking and demonstrate their creative abilities. What forms of interaction between the university and stakeholders could you offer in order for students to gain practical skills in the field of project management?

Sample overview practical lesson (option 2):Project as a management object

1. If I were the director...

Imagine yourself as the leader of your company. Assuming you know your business's strategic goal, come up with several project ideas that align with it. The main requirements are maximum realism from your point of view as a director, predictability in Time, attractiveness, a limited number of controllable parameters, a definite beginning or ending. Prepare a brief description of the project being initiated, paying attention to the life cycle, phases, gateways, constraints, project parameters. Model possible arguments for and against launching the project.

2. Three frequently encountered definitions of the concept "project":

A project is a unique process consisting of a set of interrelated and controlled activities with start and end dates, undertaken to achieve the goal of meeting specific requirements, including time, cost and resource constraints. (ISO/TR 10006: 1997 (E). Quality Management – Guidelines to quality in project management – p. 1.).

A project is a unique set of interrelated actions (works) with specific start and end dates, designed to successfully achieve a common goal. (AIPM – Australian Institute for Project Management, National Competence Standard for Project Management – Guidelines 1996 – p. 18.).

A project is a unique set of coordinated actions (work) with defined start and end points, undertaken by an individual or organization to achieve specific goals with established deadlines, costs and performance parameters. (British Standard BS 6079- 1:2000. Project management- Part 1: Guide to Project management- p.2.).

Which of the presented points of view most fully defines the meaning of the concept "project"? Give reasons for your point of view.

3. Test yourself by answering the questions and checking the appropriate letter:

No.	Statement	Right	Wrong
1	A project is a permanent enterprise or some kind of permanent activity	A	B
2	Quality of management is not important for projects	A	B
3	Completing a project on time is an important aspect of project management	A	B
4	Completing the project within budget is not important	A	B
5	Project management is no different from other areas of management	A	B
6	The temporary nature of the project poses unique challenges for project managers	A	B
7	The project parameters triangle includes the team, the project budget and its duration.	A	B
8	Project classification is very important for a project-oriented company and plays a special role in project portfolio management	A	B
9	Project life cycle gates are a kind of filters that can be passed through only when intermediate goals are achieved and intermediate results are obtained.	A	B
10	The project life cycle includes the following sequence of phases: initiation, completion and implementation	A	B

Correct answers: 1B, 2B, FOR, 4B, 5B, 6A, 7B, 8A, 9A, 10B.

4. Define the difference between functional, operational and project activities in an organization.

An organization performs various jobs to achieve a number of goals. Typically, work can be represented as projects or as operations. In this case, the activity is called operating. The product of the project can be tangible (for example, new technical equipment for cars), or intangible (training of workers), or a combination of tangible and intangible objects. The uniqueness of a product means either its significant differences from other similar products, or differences in the conditions in which it is created. In general, the activities of any enterprise or organization can be defined either as functional or as project-based (combinations of both are possible).

What is the difference between functional, operational and project activities in an organization? Give examples of functional, operational and project activities.

7.3.2 Interim certification

An approximate list of questions to be tested

1. Concept, goals and objectives of project management.
2. International and Russian project management associations.
3. Relevance of innovation project management.
4. Goals and objectives of project management.
5. Concept, classification and characteristics of an innovative project.
6. Contents, participants and environment of the project.
7. International and national project management standards.
8. Project life cycle: phases and stages.
9. Features of project life cycle management.
10. Project concept. Requirements for its content.
11. Project management models and strategies.
12. Strategic project management and its features.
13. Project management functions.
14. Process approach to project management.
15. Principles of effective project management.
16. Sequence of project management stages.
17. Basic principles of forming a project team
18. Basic principles of team development
19. Team communication management.
20. Project resource provision: requirements.
21. Project analysis: structure and composition
22. Evaluation and selection of innovative ideas.
23. Criteria for evaluation and selection of projects.
24. Development of the mission, goals and objectives of the project.
25. Rules for constructing a goal tree.
26. Examination of innovative projects.
27. Methods for assessing and selecting innovative projects.
28. Evaluating the effectiveness of innovative projects.
29. Project planning processes and levels.
30. Parameters and characteristics of design work.
31. Assessment of the social significance of the project.
32. Assessment of the economic significance of the project.