

**APPROVED**  
**by Academic Council**  
**of "Astana IT University" LLP**  
**Protocol No. 13**  
**"23" May 2024**

**Entrance exam program**  
**for applicants to doctoral studies**  
**for a group of educational program**  
**"D072 Management and Administration"**

**1. General Provisions**

1. The program was compiled in accordance with the Order of the Minister of Education and Science of the Republic of Kazakhstan dated October 31, 2018 № 600 “On approval of the Model Rules for admission to training in educational organizations implementing educational programs of higher and postgraduate education” (hereinafter referred to as the Model Rules).

2. The entrance exam to doctoral studies consists of writing an essay, an exam on the profile of a group of educational programs and an interview.

№	Block	Points
1.	Interview	30
2.	Essay	20
3.	Exam according to the profile of the educational program group	50
	Total	100

**2. Procedure for conducting the entrance exam**

1. Applicants to doctoral studies for the group of educational programs “D072 Management and Administration” undergo an interview.

2. Write a problem/thematic essay. The volume of the essay is at least 250–300 words.

3. They take the exam according to the profile of the group of the educational program. The electronic examination ticket consists of 3 questions.

**3. Essay topics for doctoral candidates**  
**in the group of educational programs “D072 Management and Administration”**

№	In English
1.	Project management and stakeholder engagement
2.	Project Risk Management and Sustainability
3.	Project management and team dynamics
4.	Flexible Project Management
5.	Project Portfolio Management
6.	International Project Management
7.	Measuring and evaluating project effectiveness
8.	Using Project Management Techniques to Make Decisions
9.	Project procurement and contract management
10.	Application of new technologies in project management

11.	Advantages and disadvantages of various methods in project management
12.	Knowledge management in projects
13.	Ethics and professional standards of project management
14.	Virtual and remote project management
15.	Project management in crisis situations

**4. Topics for exam preparation  
according to the profile of the group of the educational program  
Discipline "Project Management"**

1. Define, use and understand the project management process; Project Definition; Understanding the basics of project management; Definition of process groups; Definition of areas of knowledge; and mapping knowledge areas to process groups.

2. Contents of the project; Using tools, templates and processes to define project scope; Managing customer expectations; Planning and conducting a scoping meeting to gather requirements; Business process diagrams; Procurement management life cycle; Contract management; Supplier management; Obtaining approval for project planning.

3. Project planning; Tools, templates and processes used for project planning; Use of application software packages for project planning; Planning and conducting joint project planning sessions; Construction of a work distribution structure; Creation of WBS; Six criteria for checking the completeness of a WBS; Building a project network diagram.

4. Launch of the project; Tools, templates and processes used to start a project; Project team selection; Conducting a project kick-off meeting; Establishing team work rules; Change management; Team communications management; resource leveling strategies; Completion of the project schedule.

5. Project monitoring and management; Tools, templates and processes used to monitor and manage the project; Creation of your reporting system for work done; Application of graphical reporting tools; Managing project status meetings; defining a problem escalation strategy; Obtaining approval to close the project.

6. Closing the project; Tools, templates and processes used to close a project; Writing and maintaining client reception procedures; Closing the project; Obtaining the client's consent; Setting project deliverables; Project documentation; Conducting an audit after implementation; Writing a final report and celebrating success.

7. Project management methods; Traditional project management; Flexible project management; Approaches to project management; Understanding the area of project complexity/uncertainty.

8. Traditional project management; What is traditional project management? Linear project management life cycle; Incremental project management life cycle.

9. Flexible project management; What is Agile Project Management? Iterative project management life cycle; Adaptive project management life cycle.

10. Extreme project management; What is extreme project management? Life cycle of extreme project management; Leverage tools, templates, and processes to maximize xPM efficiency.

11. Project cost assessment; Basic principles of project cost management; Project cost estimation. Project budgeting; Project cost control methods; Cost reporting.

12. Project quality management; Basic principles of quality management; Quality management methods; Project quality management; Application of international standards in quality management systems; The procedure for preparing enterprises and organizations for certification for compliance with the requirements of the international standard.



13. Project resource management; Resource management processes; Project resources; Resource management processes; Basic principles of project resource planning; Resource procurement management.

14. Risk management; Basic concepts and structure of risk management; Methods for analyzing project risks; Risk reduction methods; Organization of risk management work.

15. International standards and certification in the field of project management; Standards applicable to the organization's project management system as a whole and allowing to assess the level of maturity of the organizational project management system; International certification in project management; Certification according to the standards of the International Project Management Association (IPMA); Certification according to the standards of the American Project Management Institute (PMI).

#### **List of sources used**

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2. A Guide to the Project Management Body of Knowledge (PMBOK® Guide) – Sixth Edition, Project Management Institute, ISBN-10: 9781628251845, ISBN-13: 978-1628251845, 2017

3. Individual Competence Baseline for Project, Program & Portfolio Management, International Project Management Association (IPMA),

4. Moreno-Monsalve, N.A., Diez-Silva, H., Diaz-Piraquive, F.N., Perez-Urbe, R.I. (Eds.), Handbook of Research on Project Management Strategies and Tools for Organizational Success. IGI Global. <http://doi:10.4018/978-1-7998-1934-9>; <https://www.igi-global.com/gateway/chapter/247361#pnlRecommendationForm>, 2020

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9. Cole R., Scotcher E., Brilliant Agile Project Management: A Practical Guide to Using Agile, Scrum and Kanban 1st Edition, ISBN-10: 1292063564, ISBN-13: 978-1292063560, 2015

10. Stellman A., Greene J., Head First Agile: A Brain-Friendly Guide to Agile Principles, Ideas, and Real-World Practices 1st Edition, ISBN-10: 9781449314330, ISBN-13: 978-1449314330

11. 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. - 383 p.

12. Verzukh, E. Project management: a crash course in the MBA program / E. Verzukh. - M.: Dialectics, 2019. - 480 p.

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### **Discipline “Assessment of project effectiveness”**

1. The concept of a project and project cycle; Classification of investment projects; The essence and content of the investment project.
2. Preliminary stage of project development and analysis; General sequence of project development and analysis; Features of economic evaluation of projects at different stages
3. The main stages of the life cycle phases of an investment project; Characteristics of each stage; At what stage of the life cycle of an investment project is the formation of the project idea, the selection of alternatives and the preliminary selection of the investor?
4. Characterize the organizational and economic mechanism for implementing the investment project.
5. Investing projects; Economic essence and classification of investments (gross, net, real, financial, direct, indirect, short-term, long-term, private, public, joint, internal, external).
6. Factors influencing the implementation of an investment project and contributing to the effectiveness of investments.
7. Assessing the social effectiveness of investment projects.
8. Assessing the budgetary efficiency of an investment project.
9. Assessing the commercial effectiveness of an investment project.
10. Assessing the effectiveness of projects taking into account risk factors and uncertainty.
- Eleven; Basic principles for assessing project effectiveness; Methodological principles; Methodological principles; Operating principles.
12. Main directions of feasibility study of investment projects.
13. Factors influencing the implementation of an investment project and contributing to the effectiveness of investments.
14. Project performance indicator systems; Methods for analyzing and assessing the effectiveness of projects.
15. Discounted criteria for assessing project effectiveness; Time value of money; Discount rate. Formulas for simple and compound interest discounting.

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