

AL-FARABI KAZAKH NATIONAL UNIVERSITY
Faculty of chemistry and chemical technology
Department of Analytical, Colloid Chemistry and Technology of Rare
Elements

Final exam program for the discipline
UPHI 7301 - Project management for chemistry engineers
UPHT 7301 - Project management for chemistry technologists

Educational program:
8D07102 "Chemistry engineering"

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Final exam program the discipline is compiled by
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Reviewed and recommended at the meeting of the _____

« ___ » _____ 2022, Protocol № ...

Head of the department _____ Argimbayeva A.M.
(signature)

Introduction

Exam format: the student on the exam schedule takes an exam by filling in the answer fields to the questions of an automatically generated exam ticket.

The exam form is written.

Exam platform: -

Exam type – offline

Control of the passing of testing - An automatic proctoring system or proctor supervises the passing of the exam.

Test duration: 3 questions, 2 hours.

On the exam in this discipline, the following types of questions are encountered (*short description of questions*)

Multiple choice - the student chooses an answer to a question from several options offered to him, and the questions may suggest one or several correct answers at once;

Closed Answers are very flexible questions consisting of text (in Moodle format), directly into which the answers are inserted. This type of question can include long and short answers, numeric, and multiple choice.

Numeric - for performing computational operations, the numerical answer can have a specified interval of the maximum permissible error of deviation from the correct value.

Topics for which test tasks will be drawn up (*the program of the course*)

1. Basic definitions of project management.
2. "Project management standards, Kazakhstan project management standard ISO 21500:2014".
3. Development of organizational structure of the training project.
4. Determination of external factors influencing the project.
5. Project life cycle and phases. Consideration of examples in the field of chemical engineering.
6. Development of a project cycle for educational projects.
7. Project surrounding.
8. Development of a brain map for the project.
9. Process groups and Project Management Knowledge areas.
10. Dividing the project into phases and defining the project gateways.
11. Project integration management.
12. Development of the Charter of the training project.
13. Stakeholder management.
14. Filling in the matrix with the stakeholders of the training project.
15. Project resource management.

16. Determination of HR needs for training projects by filling in the RACI matrix.
17. Project Scope Management. Consideration of examples from chemistry engineering.
18. Development of the WBS (Work Breakdown Structure) training project.
19. Project time management.
20. Development of the project schedule using the PDM (Precedence Diagramming) method.
21. Identification and discussion of the applicability of the PDM for projects in the field of chemistry engineering.
22. Project cost management.
23. Solving problems on the application of the earned value method (EVM).
24. Identification and discussion of the applicability of the earned value method for projects in the field of chemistry engineering.
25. Project risk management.
26. Consideration of risks in the field of chemical engineering.
27. Identifying risks in training projects and performing a qualitative risk analysis.
28. Project quality management.
29. Revealing defects in a training project using the Pareto method.
30. Project procurement management.
31. Identification of procurement needs in training projects and filling out the procurement plan.
32. Solving problems to find the point of total consumption in purchases, using PTA formula.
33. Project communications management.
34. Identification of communication needs in the project and filling in the communication matrix.

Evaluation policy (*a brief description of the assessment*)

Each ticket contains 3 questions, the answers to which are scored as follows:

1 question - 40 points

2 question - 35 points

3 question - 25 points

A total of 100 points.

Recommended Literature Sources for Exam Preparation (*provides a list of literature on the discipline to prepare for the final control*)

- Lectures materials (Project Management Course Presentations taught by Uali Kh.N., 2022)

- Lock, Dennis, Complete Guide to Project Management, Cahners Book Division, Boston, and Gower Press, Ltd., London, 1968
- Kim Heldman, PMP, Project Management JumpStart, Sybex, 3rd Edition, 2011
- A Guide to the Project Management Body of Knowledge: PMBOK® Guide (Sixth Edition), PMI, 2017
- Harold Kerzner, Ph.D., Project Management: A Systems Approach to Planning, Scheduling, and Controlling, Wiley, 11th ed., 2013
- Scott Berkun, Making Things Happen: Mastering Project Management, O'Reilly Media; Revised edition, 2008
- Terry Schmidt, PMP, Strategic Project Management Made Simple – Practical Tools for Leaders and Teams, Wiley; 1 edition, 2009
- Jack Ferraro, Project Management for Non-Project Managers Hardcover, AMACOM; First edition, 2012