

NJSC “Abylkas Saginov Karaganda Technical University”

Science-methodical council

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ENTRANCE EXAMINATION PROGRAM
for admission to the Doctoral Program

Educational Program
8D07204 – Geology and Exploration of Mineral Deposits

Department: EMD (Exploration of Mineral Deposits)

Compiled by:


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A.D. Maussymbayeva
Associate Professor, PhD F.M. Issatayeva

The Entrance Examination Program for admission to the Doctoral Program in the Educational Program 8D07204 – Geology and Exploration of Mineral Deposits (professional) was developed by the academic staff of the Department, namely:

Professor, Doct.of Tech.Sci. V.S. Portnov
Associate Professor, Cand.of Tech. Sci., PhD A.D. Maussymbayeva
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Discussed at the meeting of the Department of Exploration of Mineral Deposits

Minutes No. 12 dated “ 9 ” February 2026

Acting Head of the Department  F.M. Issatayeva “ 09 ” 02 2026
(signature)

Main Topics Covered in the Entrance Examination

1. Topic Title: Geotectonics and Geodynamics

1.1. List of Subtopics:

- 1.1.1 Methods for studying tectonic processes;
- 1.1.2 Processes in the Earth's crust;
- 1.1.3 All aspects of the hypothesis of lithospheric plate movement.

1.1 Recommended Literature

Khain V.E., Lomize M.G. **Geotectonics with Fundamentals of Geodynamics.** Textbook – 2nd edition, revised and supplemented. – Moscow: KDU, 2005. – 560p.

2. Topic Title: Geochemistry and Interpretation of Geochemical Data

2.1 List of Subtopics:

- 2.1.1 Interpretation of geochemical data of igneous rocks;
- 2.1.2 Interpretation of geochemical data of sedimentary rocks;
- 2.1.3 Interpretation of geochemical data of metamorphic rocks;
- 2.1.4 Acquisition of analytical data;
- 2.1.5 Geochemical models (diagrams, Rb-Sr and Sm-Nd isotopes).

2.1 Recommended Literature

Edited by B.V. Sklyarov. **Interpretation of Geochemical Data.** Study guide. – Moscow: Internet Engineering, 2001. – 288 p.

3. Topic Title: Major Problems of Modern Geology

3.1 List of Subtopics:

- 3.1.1 Noogeology;
- 3.1.2 Earth and Space;
- 3.1.3 Evolution of the Earth (from its formation to the Wilson–Bertrand cycles);
- 3.1.4 Global processes (riftogenesis, plumes).

3.1 Recommended Literature

Khain V.E., Lomize M.G. **Geotectonics with Fundamentals of Geodynamics.** Textbook – 2nd edition, revised and supplemented. – Moscow: KDU, 2005. – 560p.

Khain V.E. **Major Problems of Modern Geology.** Russian Academy of Sciences, Department of Earth Sciences, Institute of the Lithosphere of Marginal and Internal Seas. – 2nd edition, revised and supplemented. – Moscow: Nauchny Mir, 2003. – 346 p