



**Institute of Geology and Oil and Gas named after K. Turysov
Department of Geophysics and Seismology**

**EDUCATIONAL PROGRAM
8D05303 Applied Seismology**

Code and classification of the field of education: 8D05 Natural sciences, mathematics and statistics

Code and classification of training directions: 8D053 Physical and chemical sciences

Group of educational programs: D091 Seismology

Level based on NQF: 8

Level based on IQF: 8

Study period: 3 years

Amount of credits: 180

Almaty 2025









Educational program 8D05303 "Applied Seismology" was approved at the meeting of K.I. Satbayev KazNRTU Academic Council

Minutes #10 dated «06» 03. 2025 y.

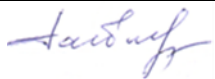


was reviewed and recommended for approval at the meeting of K.I. Satbayev KazNRTU Educational and Methodological Council

Minutes #3 dated «20» 12. 2024 y.

Educational program 8D05303 "Applied Seismology" was developed by Academic committee based on direction «8D053 «Physical and Chemical Sciences»

Full name	Academic degree/ academic title	Position	Workplace	Signature
Teaching staff:				
Boranbai Tovbasarovich Ratov	Doctor of Technical Sciences, Professor	Head of the Department of Geophysics and Seismology	Kazakh National Research Technical University named after K.I.Satpayev	
Abetov Auez Egemberdievich	Doctor of Geological and Mineralogical Sciences	Professor	Kazakh National Research Technical University named after K.I.Satpayev	
Umirova Gulzada Kubashevna	Doctor of PhD	Associate Professor	Kazakh National Research Technical University named after K.I.Satpayev	
Temirkhanova Raushan Galimzhanovna	Doctor of PhD	Associate Professor	Kazakh National Research Technical University named after K.I.Satpayev	
Siyulkanova Akgenzhe Orishanovna	Doctor of PhD	Senior Teacher	Kazakh National Research Technical University named after K.I.Satpayev	
Aliakbar Madiyar Manarbekuly	Master of Technical Sciences	Senior Teacher	Kazakh National Research Technical University named after K.I.Satpayev	
Employers:				
Mikhailova Natalia Nikolaevna	Doctor of Physical and Mathematical Sciences	Director	Kazakhstan National Data Center (KNDC)	
Uzbeks Nursarsen Bolataevich	Candidate of Physical and Mathematical Sciences	Deputy Director of Science	Institute of Seismology	

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Students				
Dosymbekova Zhansaya	Master of Technical Sciences	Doctoral student 2 years of study	Institute of Seismology	
Isagali Asem	Master of Technical Sciences	Doctoral student 2 years of study	Kazakhstan National Data Center (KNDC)	
Muzapparova Akerke Bakbergenovna	Master of Technical Sciences	Doctoral student 1 years of study	Kazakh National Research Technical University named after K.I.Satpayev	

General information

№	Field name	Comments
1	Code and classification of the field of education	8D05 Natural sciences, mathematics and statistics
2	Code and classification of training directions	8D053 Physical and Chemical Sciences
3	Educational program group	D091 Applied Seismology
4	Educational program name	8D05303 Applied Seismology
5	Short description of educational program	<p>The program for training doctors in the field of "Applied Seismology" provides:</p> <p>a) training of highly qualified specialists in the field of seismic geophysical methods for assessing seismic hazard, risk and forecasting earthquakes; obtaining by them high-quality and professional knowledge on forecasting the locations of occurrence, strength and recurrence of earthquakes;</p> <p>b) formation of knowledge in the required volume for studying earthquake sources, displacements of Earth blocks and other transformations of the environment in sources, conducting detailed studies of the processes of earthquake preparation in the real physical and geological environment, performing assessments of source parameters, identifying earthquake precursors and developing long-term, medium-term and short-term earthquake forecasts, methods of managing the seismic process, assessing the anthropogenic (technogenic) impact on seismicity;</p> <p>c) qualified solution of engineering and seismological problems, which consists of studying the seismic wave field caused by an earthquake near the source, studying strong seismic movements of the earth's surface and the interaction of soil with a structure, developing methods and conducting seismic microzoning, determining the impact of earthquakes on the hydrosphere and atmosphere of the Earth;</p> <p>d) obtaining by doctoral students high-quality and professional knowledge on the stages and rational complexes of seismic geophysical research, processing, interpretation and modeling of the obtained data.</p>
6	Purpose of EP	<p>The goal of the Educational Program is to prepare doctoral students in the relevant field with an in-depth level of professional training in the field of systemic study of natural seismic processes occurring in the Earth, in order to form a high-class specialist capable of independently solving strategic problems of seismology, managing projects and influencing the development of the</p>

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		field, taking into account the criteria of sustainable development, environmental and social responsibility, as well as management principles within the framework of ESG and the Sustainable Development Goals (SDGs)
7	Type of EP	New EP
8	The level based on NQF	8
9	The level based on IQF	8
10	Distinctive features of EP	No
11	Education form	full-time
12	Period of training	3 years
13	Amount of credits	180
14	Languages of instruction	Kazakh, Russian, English
15	Academic degree awarded	Doctor of Industry
16	Developer(s) and authors	Professor Abetov A.E., Associate Professor Umirova G.K.