Institute of Automation and Information Technologies
Department of Higher Mathematics and Modeling

EDUCATIONAL PROGRAM

8D06105 Digital Modeling

Code and classification of the field of education: 8D06 Information and Communication Technologies
Code and classification of training directions: 8D061 Information and Communication Technologies
Group of educational programs: D094 Information technologies
Level based on NQF: 8
Level based on SQF: 8
Study period: 3 years
Amount of credits: 180

Almaty 2026

The Educational Program 8D06105 Digital Modeling was approved at the meeting of the Management Board of Satbayev University
Minutes No. 5 dated 10.03.2026.

Reviewed and recommended for approval at the meeting of the Educational and Academic Council of K.I. Satbayev Kazakh National Research Technical University
Minutes No. 8 dated 26.02.2026.

Reviewed and recommended for approval at the meeting of the Educational and Methodological Council of K.I. Satbayev Kazakh National Research Technical University
Minutes No. 3 dated 25.12.2025.

The Educational Program 8D06105 Digital Modeling was reviewed and developed at the meeting of the Academic Committee.
Minutes No. 5 dated 01.12.2025.

Passport of the Educational Program

General information

No.	Field name	Comments
1	Code and classification of the field of education	8D06 Information and Communication Technologies
2	Code and classification of training directions	8D061 Information and communication technologies
3	Educational program group	D094 Information technology
4	Educational program name	8D06105 Digital modeling
5	Short description of educational program	The Educational Program is designed to prepare specialists in the field of mathematical and computer modeling of various processes and complex systems. It equips graduates with competitive knowledge and practical skills, enabling them to develop new methods for the mathematical and computer modeling of three-dimensional objects and to solve applied problems arising in the natural sciences, engineering, economics, and other fields. This Educational Program has been developed in accordance with the requirements of the Sustainable Development Goals (4, 9, 17).
6	Purpose of EP	The aim of the Educational Program «Digital Modeling» is to prepare highly qualified Doctors of Philosophy (PhD) with advanced scientific knowledge and research competencies in the field of digital modeling, capable of developing, implementing, and applying digital twins of physical objects, processes, and systems to enhance efficiency, optimize performance, and improve production and technological processes.
7	Type of EP	Innovative EP
8	The level based on NQF	8
9	The level based on SQF	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 Philosophy PhD
16	Developer(s) and authors	Azhibekova A.S., Lukpanova L.Kh.