

Baikonur - the cradle of astronautics

3rd year students of L.N. Gumilyov ENU majoring in Space Engineering and Technology visited the Baikonur Cosmodrome for an internship

Baikonur is known to everyone as the world's first cosmodrome, where the world's first cosmonaut Yu.A. Gagarin and the first artificial earth satellite were launched into space.



Photo against the background of the world's first artificial satellite Sputnik – 1

The internship was carried out in the period May 20-31, 2022. The heads of the practice were the head of the department Akhmetov K.T. and professor Jundibaev V.E. The students were [warmly welcomed](#) by the Director of the International Space School named after V.N. Chelomey Shatalov Dmitry Vladimirovich.

The production practice was carried out by the State Budgetary Educational Institution V.N. Chelomeya «International Space School».



Photo against the background of the International Space School

According to the production practice plan, the sites at the Baikonur Cosmodrome were visited, both non-working and operating. Among them, it is important to single out site No. 1 or the [Gagarin launch](#), where the first man was launched into space. Here the students could see with their own eyes the launch pad for a space rocket and learn more about the launch process.

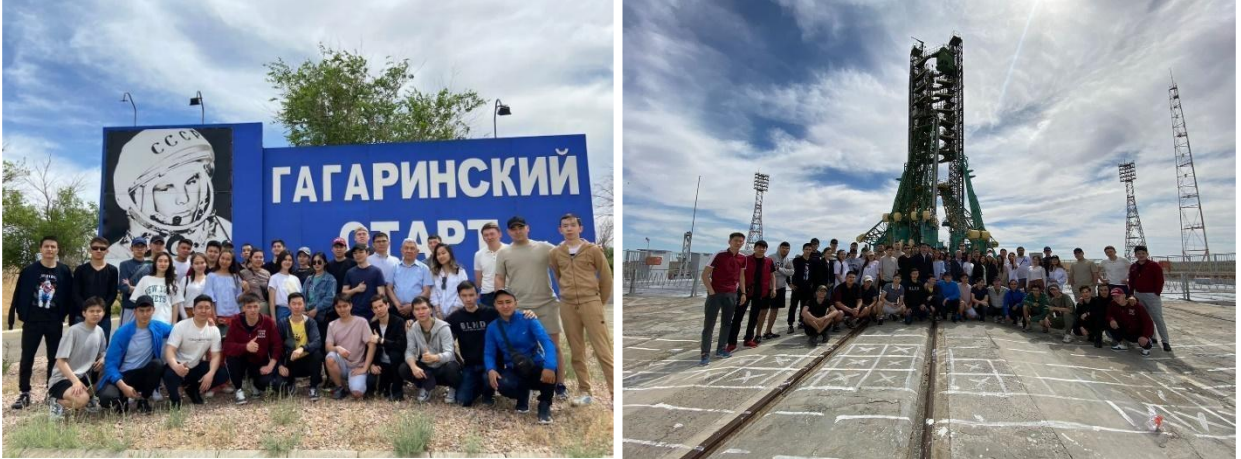


Photo on the background of the Gagarin launch

For the first time in many years, the leadership of the cosmodrome was allowed to visit the command post of the launch complex, where the tracking, launch and control of the launch vehicle takes place. At the command post, control and tracking of the launch takes place with the help of special equipment; you can also monitor the launch using a periscope directed towards the launch pad.



Photo of the command post, view from the periscope, equipment of the command post

As you know, the assembly of launch vehicle stages is carried out at the cosmodrome in special assembly and test buildings. The students visited the building designed for the couple, the Energia launch vehicle - the Buran shuttle.

Shuttle "Buran" is a special spacecraft, which managed to completely carry out the most difficult landing on its own in inconvenient weather conditions. The landing was made at the Yubileinaya landing site.



Photo of the landing strip - the Yubileinaya site, a mechanism for transporting heavy launch vehicles with cargo, an example of Energia-Buran, Energia-Buran flight control equipment

Work sites were visited where preparatory work is being carried out before the launch of the Soyuz 2.1a launch vehicle with the Progress MS-20 cargo spacecraft.

There was a tour of the famous [museum of the history](#) of the Baikonur Cosmodrome. The students saw models of the Buran shuttle, the Soyuz spacecraft and many other historically valuable exhibits.



Photo against the background of the Soviet shuttle "Buran" and a photo of the Soyuz spacecraft

The International Space School held courses on [rocket modeling](#), where students were able to create their first rocket models with their own hands, and later participate in launching models using special model rocket engines. At the end of the competition, all groups, according to the results of the flight, were issued certificates in two areas:

- rocket model with belt rescue system S-6A
- rocket model with parachute rescue system S-3A



Photos of the collection of rocket models and the final result

School teachers conducted educational video lessons on the history of rocket science and space. Students listened to lectures about launch vehicles Energia, Proton, Soyuz, N-1. The N-1 is the most incredible launch vehicle built in the Soviet Union, designed to take a man to the moon. However, the program was not fully implemented, and after the fourth launch, when the United States managed to land on the moon before the USSR, it was decided to close the program and instead of this program, a new project was launched, called the space rocket complex of the reusable transport and space system Energia-Buran.



Launch complex "N-1", MTKS "Energia-Buran"

Industrial practice conducted for third-year students of the specialty "Space Technique and Technology" L.N. Gumilev ENU at the Baikonur Cosmodrome, provided a great opportunity for students to gain practical experience, who will soon become specialists in the field of rocket science themselves. The students were able both to apply their knowledge in practical classes and replenish the piggy bank with new ones by asking questions to specialists working at the cosmodrome and teachers of the International Space School named after V.N. Chelomey.