



## LEARNING AND STUDENTS

Irkutsk National Research Technical University is one of the most innovative universities in Irkutsk region and leader of innovation activities.

### Rankings and Education

In 2023 INRTU becomes one of the best universities in engineering sciences under the Times Higher Education World University Rankings 2024. INRTU was ranked 1001+ among universities in the world and 31st among Russian universities. Besides this, our university entered the ranking on implementing educational programs for entrepreneurship. The Interfax Group within the National University Rating Project (NRU), evaluated the educational programs of Russian universities related to entrepreneurship and INRTU was included into this rating with the other 20 universities of Russia.



### Educational programs for sustainable development

In order to promote sustainable infrastructure, inclusive industrialization and innovation, the university implements a large number of [educational programs in the STEM](#) (Science, Technology, Engineering and Math subject area). A number of programs are also taught in English, which makes it accessible to a foreign contingent of students, mainly from Baikal School of BRICS, for instance, [Artificial Intelligence and Computer Science](#), [Power Electrical Engineering](#), [IT in Geology](#).

**538 mln RUB**

Total income from comprehensive R&D work

**339**

Total number of Scopus publications

### Project for new Master degree Programs

5 working groups are created at INRTU to refine and create new master's degree programs for training in IT, mechanical engineering and construction spheres. Each group of teachers will try to introduce modern approaches to the administration of the educational process. The university has a program "Digitalization of industrial enterprises", this is an improved version of the existing program "Information Systems and Technologies".

### Innovative Approaches to Learning

The most popular innovative teaching methods among students and teaching staff are classes in research communities ("[Quantum](#)", "[Carbon](#)"), network projects, sessions, grant contest "[Vanguard of Science](#)", training within the projects on companies [requests](#), [international hakhatons](#), training for the graduate project "[Startup for diploma](#)" etc.



## RESEARCH

### Being a platform for scientific creativity

Our University conducts scientific research, develops technologies implemented in the region's [enterprises and companies](#), adopts foreign experience and actively contributes to the process of [import substitution](#). In addition, INRTU organizes various conferences in the field of innovative technologies, geosciences, information security, holds sessions and acts as a platform for evaluating the work of young scientists.

- Research income from industry and commerce: Total  $\text{P } 515\,649\,466,6$
- Research income from industry and commerce by subject area: STEM  $\text{P}512\,649\,467$
- Number of academic staff 958 out of 1016
- Number of academic staff by subject area: STEM: 787 out of 1016
- Number of academic staff by subject area: Arts & Humanities / Social Sciences 171 out of 1016

### Patents for innovative research

INRTU professors and teaching staff [patented 50 innovative developments in 2023](#). The number of contracts on scientific research over 10 million rubles has increased 4 times compared to last year. Last year INRTU researchers submitted 50 applications for legal protection of intellectual activity. The university has received 12 patents for inventions, 5 utility models, 4 industrial designs and 2 trademarks. In addition, INRTU becomes the rightholder of 27 certificates of state registration for computer programs and databases.



### Participation in Archipelago-2023

Anton Shutenkov, an INRTU postgraduate took part in the design and educational intensive "[Archipelago- 2023](#)" in Novosibirsk together with the other members of Irkutsk region delegation. The team introduced the concept of a regional program for the development of unmanned aircraft systems (drones). As a result, experts highly appreciated the ideas of the team and considered metaslide the best among the others. The project provides opening of logistics, research and production centers.

## PUBLIC ENGAGEMENT

### Laboratory of Siberian School of Geosciences

[Chemical and Analytical Laboratory](#) has received an accreditation certificate and can now test rocks, ores, soils, soil, sewage sludge, vegetation for the presence of various metals, primarily gold and silver. The Siberian School of Geosciences entered the market of chemical analytical research in 2023. The laboratory allows to significantly increase the efficiency of ongoing exploration and geoecological projects due to efficiency, mobility, and high quality of work. Chemical tests can be carried out both stationary and in mobile laboratories, as customers need high-quality and fast analysis, getting the result on the spot.

### Cooperation with machinery enterprises

[Representatives](#) of region ministries and industrial companies visited INRTU to strengthen cooperation between the university and real sector of the economy. Many companies have an interest in active cooperation with INRTU, for example, a company from Shelekhov town: INRTU programmed a robot for production, manufactured composite products, conducted reverse engineering. In 2023, the company presented the first domestic centrifugal concentrator for processing mineral and man-made raw materials thanks to design and construction assistance of INRTU. In addition, our University continues to increase [cooperation](#) with aircraft manufacturing enterprises.

## OPERATIONS

### International Engineering Championship

Intersectoral dialogue, as well as cooperation and participation in the work of various NGOs on SDG issues is achieved through the traditional [International Engineering Championship CASE-IN](#). 12 student teams from 8 regions will present import substitution solutions for ALROSA enterprises in the final of the Autumn Cup of the International Engineering CASE-IN Championship. According to the championship results, INRTU team "Oil Sharks inc." was recognized as the leader of the Student League that worked on the case of JSC ALROSA (PJSC).

### Spirit of innovations at University

Within "Priority 2023" INRTU academic staff are interested in increasing INRTU scientific and educational potential. The university scientists has already developed the following technologies:

- Electrochemical generator for motortransport in the [Baikal water area](#)
- Wireless vibration monitoring and diagnostics system at [Irkutsk Thermal Power Plant](#)

