



LEARNING AND STUDENTS

Irkutsk National Research Technical University is the leader of the Irkutsk region in innovation activities. In 2017, the university received the status of a regional center for technological 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](#).

Unique Methods in Education

[IT Academy](#) is an additional training program for students specializing in information technology for "RUSAL" and "En+ Group" on the basis of Irkutsk National Research Technical University and other universities. The project provides for an enhanced specialized training program, formed with the help of company experts. In 2022, [almost 100 students](#) decided to take up these training courses.

Innovative Approaches to Learning

The most popular among innovative teaching methods are specialized classes, network projects, pitch sessions (as it was in the field of [bionics](#), [the creation of drones](#)), [environmental hackathons](#), thematic Olympiads and competitions, project activities [on request of IT companies](#), lectures from [industry representatives or experts](#) for example, when the staff of the investigative committee told students about the use of [artificial intelligence in criminology](#), [gamification and virtualization technologies](#) into the educational process of students and [startup as a diploma thesis](#) etc.



60
innovative
projects
annually

RESEARCH

As a source and place of scientific creativity

Our University conducts scientific research, develops technologies implemented in [region's enterprises](#) and [companies](#), adopts foreign experience and actively contributes to the process of import substitution. Many technologies have already been [patented by the university scientists](#). 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.

Science of students

The University actively engages students in the innovative scientific activity on campus. One of the catalysts of this process is the annual national [Festival Nauka0+](#), participation in all national student competitions to demonstrate their [achievements on innovations](#), as well as close cooperation with the ["Umnik" Innovation Promotion Foundation](#).

59 scientific research and SCOPUS publications

Research income from industry and commerce: Total **₽478 685 800**
Research income from industry and commerce by subject area:
STEM **₽465 387 500**



46 university spin-offs

1421 staff total / 953 academic staff
757 academic staff by subject area: STEM
192 academic staff by subject area: Arts & Humanities

PUBLIC ENGAGEMENT

IDigital38 Regional Forum

Intersectoral dialogue, as well as cooperation and participation in the work of various NGOs on SDG issues is achieved through the traditional [IT forum IDigital38](#). In 2022, the forum was distinguished by



a rich program, including the [Baikal Unity VR & GameDev hackathon](#), a round table on the topic of [developing IT competencies of teachers and schoolchildren](#), the session on the best practices of [digital transformation of enterprises](#) in the region, taking into account modern IT trends, as well as the first school competitions on practical information security [IrkutskCTF Junior](#).

Open Innovations for schoolchildren

A huge amount of work is devoted to scientific and entertainment events for schoolchildren, school leavers from the region. Thus, there were [engineering holidays](#) at university, when more than 200 schoolchildren had the opportunity to immerse into the engineering profession in 12 subjects, including metallurgy, mechanical engineering, energy and biotechnology, innovation, etc.

Moreover, within the Science 0+ Festival, INRTU organized amazing [excursions to laboratories](#) and information security [tournament IrkutskCTF Junior](#) for young visitors. The popularization of engineering sphere contributes to the common increase of young talented pupils who may enter the university and work in the future for the prosperity of the region and native country.



Demand for innovation in Region

Within the work of various accelerators and practical laboratories, the technical proposals of students are often taken into account when modernizing and introducing new approaches in various companies are very urgent. A bright example is the willingness of the management of the [Bratsk hydroelectric power plant](#) to use



the working documentation on the installation of arched structures, offered by the students of the Energy Lab accelerator, held in many Russian cities.

OPERATIONS

Spirit of innovations at University

The status of the national research university, as well as being in the [register of potential executors](#) of state contracts for advanced industries, made it possible to enter the state program "Priority 2030". INRTU professors, teachers and scientists are interested in increasing the scientific and educational potential of the university, where they work, do research activities and scientific developments, that have particular importance for maintaining the technical reputation of the university.



The university scientists has already developed the following technologies:

[equipment](#) for PJSC Aviastar [autonomous lighting](#) at minus ambient temperature using [geodetic GNSS-equipment and ground-based scanning systems](#).

[SibGIS UAS](#) unmanned complex for performing high-precision geophysical and geodetic work on the search for uranium deposits etc.

The innovative component of the university activity is gradually introduced into the daily life on campus by [installing devices for monitoring](#) the microclimate in classrooms. The device's indicator is able to determine carbon dioxide in the air, while changing the color from green to red.

