

SDG4: Quality Education

Moscow Polytech at a Glance

Moscow Polytech builds relationships and cooperates with local, national and international educational institutions, Government organizations, business and professional associations looking to provide inclusive, equitable and high-quality education and training. Efforts made by Moscow Polytech and its partners help to **promote lifelong learning opportunities** and bring benefits to students, academic staff, local communities and broader population opening **new opportunities for all**. Learning benefits not only help to improve individual standards of living. They encourage contributing to a healthy future. A range of initiatives and projects were organized and implemented in 2022-2023 academic year, including annual flagship events and newly designed activities referred to below.

Moscow Polytech was proud to **provide free access to university's educational resources and infrastructure**, including [libraries](#) equipped with computers (available to students of other universities, colleges, representatives of industrial enterprises, partner organizations and other categories). The university delivered training courses and [professional retraining courses](#), lectures (including tailored) and master-classes, presentations and demonstrations on campus and outside – at schools, libraries, media and exhibition public spaces for various groups of population, as well as online. The university engaged with various audiences, those who studied or worked at the university and external audience.

A few social activities and volunteering programs, implemented by students and academic staff and supported by partner organizations and Government bodies and authorities, can be viewed in Table 1 below.

Featured key stakeholders, events and activities

[The Engineering School](#) (Faculty) of the Moscow Polytech, which is an engineering educational environment for high school students, their parents and teachers, provided **free training and** organized **career guidance events** to more than 14,000 Muscovites. The School organized [a series of activities](#), including [entrepreneurship classes](#) in Moscow schools as part of the **All-Russian educational campaigns "Scientists to School", "Engineering classes", "IT classes", "Media classes"**. The Engineering School organized several **SMART events-Open Days** for students of Moscow engineering-focused schools, the Moscow interdisciplinary **competition "Intellectual Megapolis. Prospects"** (focused on IT robotics), **Moscow Olympiads** for students of specialty (pre-professional) profile in biology, engineering and design. Regular [University Saturdays](#) were organized for schoolchildren, their parents and teachers aimed at popularizing STEAM education and training, and promoting new technologies, in the development of which Mospolytech took part (quadcopters, flying robotics, and an interactive lecture on biomimetics). Teacher training included a series of master classes on the "Theory of Inventive Problem Solving".

The Engineering School and other faculties offered **training and educational courses** to participants of the Moscow Government's ["Longevity" program](#). Activities were organized for people of pre-retirement and retirement age over 55 years old, aimed at improving the quality of life of elderly Muscovites. The programs included various disciplines, including information technology, creative industries, healthy eating, and commerce, among many others.

The Engineering School organized **free lectures for teaching staff** of educational organizations within the framework of the **Year of the Teacher and Mentor – 2023**. The School organized interactive lectures, master-classes and trainings to improve teachers' knowledge and develop their competencies for working with young people. Mospolytech's academic staff also shared **new teaching methods** to school and VET teachers aiming to help their students to prepare for the Final State Exam (USE), subject Olympiads, as well as to help teachers improve program design skills. This allowed teachers to attract students and their parents to learning STEAM subjects both on campus and online.

The events were organized jointly with university faculties, public authorities and local governments, partner organizations. The University **strengthened cooperation with the Department of Education and Science, the Department of Entrepreneurship and Innovative Development, the Department of Labor and Social Protection of the Population of the city of Moscow.**

Free educational projects for Moscow residents conducted by The Engineering School (Faculty) in 2023

Project name	The number of residents participating in the project
Conference "Science for Life" in Media	1200
Support of the practical stage of the Moscow contest of interdisciplinary skills and knowledge "Intellectual Megapolis. Potential" in the nomination "IT class" in the field of robotics, the Moscow Olympiad of schoolchildren (pre-professional) in biology, the Moscow Olympiad of Schoolchildren (pre-professional) in engineering and design profile	600
Implementation of additional education programs on the basis of the Center for Technological Support of Education (CTPE) of the Moscow Polytechnic University	850
Projects "Entrepreneurial class at Moscow school", "Engineering class at Moscow school", "IT class at Moscow school", "Media class at Moscow school"	2019
Implementation of training programs for teachers of schools and colleges in Moscow	580
Career guidance activities of the University (Open days, SMART open days, exhibition activities, etc.)	5742
Moscow "Longevity" Program	825
The University Saturdays Project	2590
Total	14406

[Advanced Engineering School for Electric Vehicles \(AES\)](#), in addition to Master's programs and student projects focused on creating racing prototypes, electric motorcycles and modifying sports cars, were actively involved in **promoting sustainable transport and new technologies**. AES, jointly with [Children's Technopark](#), organized **Open Days** for schoolchildren at various locations. One of the featured activities included an exhibition of art objects "[Renaissance of Engineering Art](#)" dedicated to the innovative developments of university engineers – Smart shuttle, Marussia GT sports car, and MIG R2 electric bike. The School, together with the **BMW Group**, organized camps for children aged 6 to 14 years with focus on road safety, fundamentals of the automotive industry and sustainable development.

More than 120 Moscow schoolchildren joined the project "**School #Mediakidspolitech**" organized by the [Museum of the History of Printing and the Ivan Fedorov Institute of Printing](#). The school students took part in master classes, visited modern printing production sites and met with representatives of the media and the film industries. The Moscow Department of Education and Science and the City Methodological Center supported these activities.

[Center for Assessment and Development of Management Competencies](#) provided training for internal and external clients and partner organizations on the development of professional, managerial, creative and digital competencies and soft skills (analytical and communication skills, self-control, teamwork and resilience, universal management competencies). Training for industrial partners, including client-tailored courses, were also delivered online.

Center for Advanced Training and Retraining and the Faculty of Economics and Management conducted training for partner-organizations and schoolchildren. Among popular activities were the [Manager's Day](#), an intensive educational course "Social Responsibility" ([ART TEAM project](#)) for project creators and managers of creative industries (attended by more than 60 participants from 22 regions of Russia), lectures on social startups and interaction with NGOs, grant and competitive activities.

[Intensive course](#) "Development of diversity thinking for heads of scientific organizations of higher education" was organized for representatives of the personnel reserve of the Ministry of Science and Higher Education of Russia. The co-organizer of the event was the platform "Russia - the country of opportunities". Activities included trainings, master classes, business games and strategic sessions.

Moscow Polytech held regular **open educational events and training activities** at campus for schoolchildren and students:

- Admission consultations, workshops and quests at the [Open Days](#).
- Promotion of [rescue work](#) and conducting educational classes for schoolchildren.
- Organizing [a city school](#) for schoolchildren counselors with the issuance of certificates.
- [Science and research](#) promotion among students and schoolchildren.
- Activities at the ["Flying Robotics" laboratory](#).
- Students representing different clubs [performed](#) outside the university campus.

Moscow Polytech participated in **national forums and initiatives, and the activities in the framework of the Moscow City Government projects**.

- It organized a **pavilion at the Moscow International Education Exhibition (MISE)** at Crocus Expo (one of the largest exhibition centers in Russia) to promote education, science and technology through workshops, discussions, lectures and meetings with students and senior teachers.
- As part of the **educational marathon "My Territory of Success"**, master classes for more than 170 students in grades 7-11 were organized at secondary school No. 8 in the Moscow region with the support of the Committee on Education and Youth Policy. The activities were devoted to current trends in SMM, new technologies, aspects of sustainable development (separate waste collection and recycling), public speaking skills, among others. The participants also took part in quizzes under the guidance of university teachers.
- Moscow Polytechnic became an intellectual partner of the ["Russian Creative Week"](#) and organized several key activities focused on new practices, ran hackathons and competitions, highlighted the opportunities for the professional growth (individual educational trajectories for creative industries).
- **Educational intensive courses: "Social responsibility"** focused on developing creativity, graphically submit projects and use digital technologies in brand communications, about the basics of marketing in creative production, pricing and budgeting, as well as the risks of projects. Lectures on social startups and interaction with NGOs, grant and competitive activities, and the basics of crowdfunding. As part of the intensive "Personal project for a client" - the basics of public speaking and personal branding, lectures on the art of pitching and social design, evaluating the effectiveness of the project, the basic principles of creative video production.
- Scientists, engineers and designers from Moscow Polytechnic University [presented advanced technologies in the automotive industry during the City Day](#) organized by the Moscow Government, and talked about the future of electric and unmanned transport in Russia. The event ["More than science"](#) in the "Art.Technograd" included thematic lectures, an exhibition of cars and art objects, master classes and attracted young guests and students, engaged in research and scientific technical creativity, as well as general audience.

Table 1. Featured educational, social and volunteer activities

06.12.22	Training of Moscow schoolchildren in the development of project management, and engineering and technical competencies on the basis of the Education Technical Support Center of Moscow Polytech. The result is the 1st place of one of the projects by a 4th grade student of school No. 185 in the city competition "Engineering Start-2022".
14.12.22	During the Moscow Polytech's competition, students and schoolchildren acquired practical skills of solving non-standard technical issues that correspond to the level of development of science and technology at the All-Russian Engineering Hackathon.
21.12.22	Development of skills for finalists of the All-Russian Engineering Hackathon «ВИХрь-22». A separate competition for school students was organized, with awarding the winner - the team of School №2000 (Moscow).
10.02.23	ProDESIGN.Junior is a prestigious competition for schoolchildren, students and young specialists in the sphere of design. A 2 nd year student of Mospolytech was awarded the first place for the design of the KAMAZ flyer, cover and billboard.
14.02.23	A training program for an international figital tournament "Games of the Future". The competitions supported the concept of figital combining classic sports, e-sports and technology. The Moscow Polytech's Volunteer Center played a partner role in organizing and running the event.
16.02.23	The Faculty of Economics and Psychological Service Centre organized a contest of a social poster "The Vector of Health" in the framework of the World Health Day. Students and employees of Moscow Polytech, representatives of Moscow-based colleges and schools joined the event.
06.03.23	The final of the National Technology Olympiad (5 days) in the "Engineering biological systems. Agro-bio-technologies" profile was organized by Mospolytech. Second-ranked Olympiad (by the Russian Council of School Students Olympiads (RCSSO)), gives winners benefits for admission to the university – 100 points of the Unified State Exam in chemistry or biology, or admission without entrance tests for a number of specialties.
29.03.23	Organization of voluntary qualifying exams allowing winning students to be invited by employers for internships and potentially get further employment. Winners in "Programming" and "Mobile Development" met with potential employers; Carrier-focused consultations during such projects, including around "Business Week-end" and the "Day Without Turnstiles", give benefits to students and employers.
04.04.23	The university provided training to school students for undergoing final stage of an international Olympiad "The Art of Graphics". Students completed tasks online and download their works on the website of Moscow Polytech, and then selected students completed the tasks in person at the University campus.
17 .04.23	Education of high school students of Moscow and Moscow Region for undergoing the final stage of the Olympiad in Engineering and Computer Graphics in three age categories: school/vet graduates, school students of 5-10 classes (the profile level), school students of 5 -10 classes (basic level).
14.07.23	Moscow Polytech received the prize at the competition of professional skills in the nomination "The Best Educational Project" aimed at increasing interest in reading among young people.
19.07.23	Moscow Polytech offered students additional training in entrepreneurship to give opportunities in implementation of innovative projects.
28.07.23	The 5th Competition of the Mayor of Moscow was aimed at the development of practical skills in designing digital solutions for the city of Moscow. Moscow Polytech's teams took gold and silver medals at the hackathon for creating a platform for managing the internships administration and developing the video game using the image of Moscow as the game world.