

Engineering Start at SibFU

Polytechnic School and School of Non-Ferrous Metals and Material Science have launched Engineering Start training module in the STEM (Science, Technology, Engineering, Mathematics) format. The purpose of teams is to construct engineering facilities of diverse complexity.



The students of the following educational programs can take part in the training:

- Heat power engineering and heat engineering;
- Mechatronics and robotics;
- Design and engineering support of machinery production;
- CDIO Metallurgy;
- Mechanical engineering.

"If we talk about the quality of a modern engineer training, it is quite obvious that an engineer must acquire both hard skills and soft skills. Therefore, it is significant to apply communication and competitive elements in the educational process," considers **Andrey Kolotov**, candidate of science (Engineering), assistant professor of the Department of Applied Mathematics.



"The former schoolchildren get a real technical task along with materials, access to equipment and tools, and they must do this project not alone, but in a team. In fact, that's a kind of modeling of the production process. During the project implementation, students get used to each other and learn to work in a team. They allocate roles and responsibilities, learn to control the timing of each stage of the task. The atmosphere at the event is simply undescrivable, especially in the finals."

The Engineering Start program has been held for 7 years. Over the past period, both the number of specialties and the participants have doubled.

Margarita Kovel, graduate of the CDIO Metallurgy Department: *"While participating in the Engineering Start, I experienced the most wonderful emotions from training. It was a real test of our engineering skills. Independent cost estimation, selection of materials, sketches of drawings, design of inventions in the workshop gave me and my peers the opportunity to immerse ourselves in the atmosphere of engineering, and to experience the competitive spirit, unexpected excitement (what if others are better?). Each team developed its own unique idea of inventions, which was simply impossible to repeat. I still remember how excited everyone was, how everyone wanted to create something unreal, something unusual to surprise everyone. My team did a great job. For us, it was the easiest task, we used a container with sulfuric acid for it. The lighthouse turned out to be the most difficult, because we used a spinner for it, which everyone really liked, and we were able to get deserved points. I found the Engineering Start the most practical immersion for me, thanks to which I began to develop my engineering thinking and was able to use this practical experience the next semesters, carrying out engineering projects."*

The training module will end with a competition — it will be held for the seventh time. The organizers believe that such events contribute to maintaining the scientific interest of students.

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