

# Materials Science and Technologies

National Research Tomsk Polytechnic University

Degree or qualification is awarded: **Master degree**

Language of study: **Russian, English**

Mode of study: **full-time**

Duration: **2 years**

Availability of free education: **yes**

Price: **227 490 RUB / year**

Programme webpage at the university website:

<http://masters.tpu.ru/navigation/priemnaya-kampaniya/napravleniya-podgotovki/materialovedenie-i-texnologii-materialov/>

Programme curator: **Sergey V. Panin**

Tel.: **+73822286904**

E-mail: [svp71@tpu.ru](mailto:svp71@tpu.ru)

## Program Overview

The program is focused on the fundamental physical and technical training of graduates to be successfully employed in different fields of research and development of materials and engineering. The Master's educational program include core courses in physics, mathematics, material science, physical chemistry and surface physics for students to obtain special knowledge and skills according to Russian and international educational standards. Education deals with theoretical and practical study in the field of modern material science of organic polymers, non-organic metals and ceramics to be applied in different industries to develop novel engineering structures and technologies, methods for investigation and testing of materials.

## Main Modules

- Computer Simulation of Materials and Technologies
- Modern Surface Hardening and Coating Technologies
- Condition Monitoring and Reliability Inspection of Materials and Parts
- Micro- and Nanosized Polymer Composite Materials

## Career Opportunities

- researcher in the field of development of novel materials for different applications
- technologist for manufacturing of materials with specified properties
- specialist for diagnostics of loaded structures and machinery
- teaching in the field of material science and computer simulation of materials

Types of organizations: Research institutes and universities, laboratories in different engineering companies and plants.

## Academic staff

- Panin Viktor, D.Sc., Professor, Academician of RAS, h-index 18, research and development of Physical

mesomechanics of materials and nanomaterials

- Kulkov Sergey, h-index 9, Research and development of high-strength ceramic materials
- Panin Sergey, h-index 7, Research and development of wear resistant polymer composite materials

Lebedev Sergey, h-index 6, Research and development of development of polymer composite materials for mechanical and electrical engineering

## **Specializations within this programme**

[Computer Simulation of Materials Production, Processing and Treatment](#)