

Quantum Physics for Advanced Materials Engineering

National University of Science and Technology MISIS

Degree or qualification is awarded: **Master of Science in Physics**

Language of study: **English**

Mode of study: **full-time**

Duration: **2 years**

Availability of free education: **yes**

Price: **265 000 rubles/year**

Programme webpage at the university website: <https://en.misis.ru/academics/masters-english/quantum-physics/>

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This Master's program teaches the macroscopic quantum phenomena discovered in nano-structured materials and quantum devices created within the last 20-30 years in the search for components for quantum electronics. At the same time the program addresses the basic physical principles of correlated electron systems and devices of quantum electronics, as well as some important manufacturing techniques and measurements of physical and chemical characteristics of quantum-sized structures and metamaterials.

Specializations within this programme

- Quantum Electronic Properties of Nanosystems
- Physics of Liquid-Crystal and biomembranes
- Physics of Low-Dimensional Systems
- Experimental Methods in the Physics of Low-dimensional Systems
- Electronic Properties of Quantum Confined Semiconductor Heterostructures
- Introduction into Quantum field theory in condensed matter physics
- Physical Principles of Quantum Information and Macroscopic Quantum Phenomena in Superconducting Systems