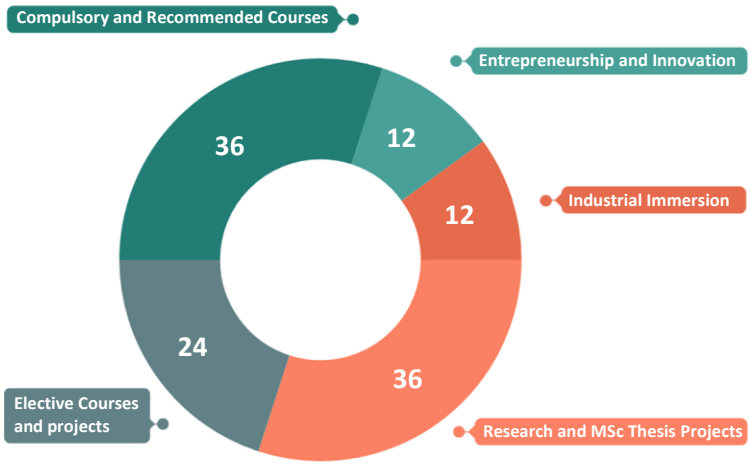
Skoltech
Skolkovo Institute of Science and Technology

Photonics and Quantum Materials
Master of Science Program

Master of Science in Applied Mathematics and Physics

Full-time **2 year** program | 120 ECTS



Students may specialize in:

A Photonics and Quantum Materials
B Spectroscopy, Quantum Optics and Nanophotonics
C Physics and Technology of Nanostructures

Track B: in the network form with Academic Partners: Moscow Institute of Physics and Technology & Institute for Spectroscopy RAS

Track C: in the network form with Academic Partners: Moscow Institute of Physics and Technology & Institute of Solid State Physics RAS

The Skoltech center of Photonics & Quantum Materials (CPQM) seeks to lead world-wide research in novel quantum materials and photonics, that promises to transform signal processing, computations, and enhance the performance of electronic devices. CPQM is putting significant emphasis on key national initiative directions and industrial applications.

crei.skoltech.ru/cpqm

	A	B	C
Compulsory Courses			
Physical background of Photonics	■	■	■
Quantum mechanics	■	■	■
Recommended Electives			
Introduction to Solid State Physics	■		
Advanced Solid State Physics	■		
Hybrid Photonics	■	■	
Quantum optics	■	■	
Spectroscopy of Quantum Materials	■	■	
Laser Physics	■	■	
Nanooptics	■	■	■
Nonlinear Optics	■	■	■
Biomedical Application of Photonics	■	■	
Fundamentals of device physics	■		
Carbon nanomaterials	■		■
Quantum phenomena in nanosystems	■		■
Methods of experimental physics	■	■	■
Molecular spectroscopy		■	
Laser spectroscopy		■	
Practicum in multi-stage nanotechnologies			■
Physics of semiconductors and insulators			■
Transport in mesoscopic physics	■		■

Elective Courses

See at the Skoltech Course Catalogue:
skoltech.ru/en/education/course-catalogue

Industrial Partners

PKC

IPG PHOTONICS

Program Director
Ildar Gabitov
Professor, CPQM Director, University of Arizona

i.gabitov@skoltech.ru

Program Coordinator
Mikhail Skvortsov
Associate Professor

m.skvortsov@skoltech.ru

apply.skoltech.ru