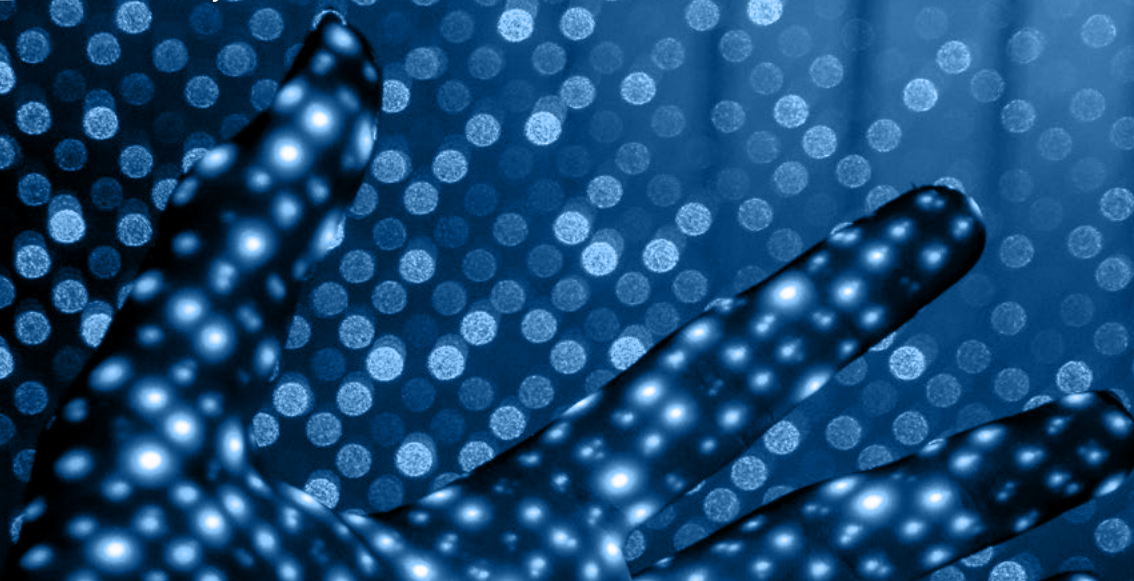




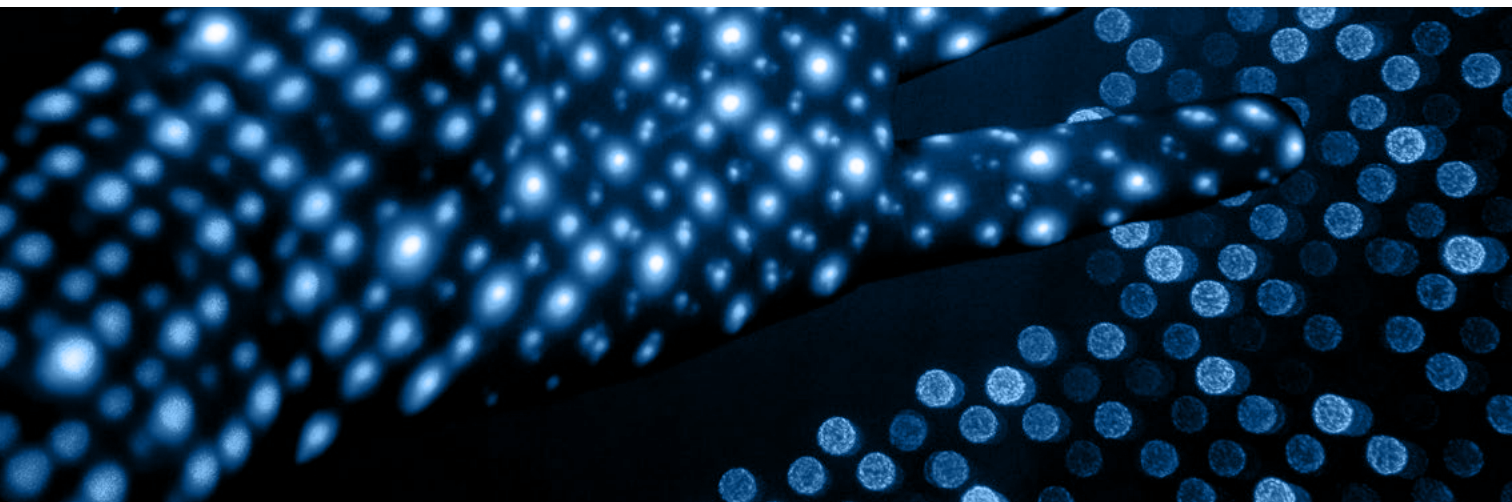
# POLYTECH

Peter the Great  
St. Petersburg Polytechnic  
University

ENGINEERING



## LASER AND FIBER OPTIC SYSTEMS



**PROGRAM NAME:** Laser and Fiber Optic Systems

**AWARD:** Master of Science

**MODE OF STUDY:** full-time

**COURSE DURATION:** 2 years: 4 semesters at SPbPU

**PROGRAM OUTLINE:** Students are trained to do research and development in the field of laser and fiber optic systems. Skills to carry out research in the field of infocommunications and to develop advanced optical communication systems are given. Practical skills are obtained during the research works.

**CURRICULUM (GENERAL MODULES):**

MODULES	ECTS
Theory of Building Communication Systems and Networks	4
Laser Systems and Quantum Electronics	3
Information Processing, Optical Signal Processing, Space-Time Signal Processing	5
Devices and Components of Fiber-optic Telecommunication Systems	5
Fiber-Optic Systems and Sensors	4
Fundamentals of Quantum Optics	3
Light Propagation in Nonlinear Media	4
Methods of Simulation and Optimization	3
Spectroscopy of Materials for Laser Technologies	2
Theory of Electromagnetic Compatibility of Radioelectronic Facilities and Systems	3
Modern Information Technologies	3
Laser Technologies and Holography	3
Elective Courses (Practice on Laser and Fiber-Optic Technologies)	10
Humanitarian Module	8
Master's Thesis and Research Work	60
Total	120

**ENTRY REQUIREMENTS:** Bachelor's, Specialist's or Master's degree in a relevant area is required / English language proficiency - B+ (CEFR B2) / Exam Test in a relevant field of studies / Interview in English with a program coordinator (Skype option is available)

**PARTNERS:**

- Lazer Zentrum Hannover, Deutschland
- A.F.Ioffe Physico-Technical Institute
- Concern CSRI Elektropribor
- National Research Institute "Electron"
- Concern "Granit-Electron"
- Rubin Central Design Bureau
- Research Institute "Vektor"
- Russian Institute of Radionavigation and Time
- Russian Institute for Power Radiobuilding Vavilov State Optical Institute

**CAREER OPPORTUNITIES:** Upon graduation of this course one may pursue positions in R&D departments in international companies in the field of telecommunication and optic systems. There is also an option to continue studies and get PhD.

