

Summer/Winter School on Laser and Optical Measurements

Saint Petersburg Electrotechnical University "LETI"

Degree or qualification is awarded: **standard certificate**

Language of study: **Russian**

Mode of study: **full-time**

Duration: **2 weeks**

Availability of free education: **yes**

Price: **30 000 rubles**

Programme webpage at the university website:

<https://etu.ru/en/study/winter-and-summer-schools/laser-and-optical-measurements>

Programme curator: **Veronika Domanova**

Tel.: **+7 812 234-35-53**

E-mail: vvdomanova@etu.ru

Optical measurement methods have gained a prominent importance for metrology. Although optical measurement technology is a rapidly growing area, it is not a new discipline. The development of physical sciences has been affected from the very beginning by optical measurement techniques. A great range of such techniques nowadays is based on the interference.

About the optical interferometry

Since the wavelength of visible light is quite small (approximately half a micrometer for green light), very small changes in the optical path difference produce measurable changes in the intensity of an interference pattern. As a result, optical interferometry permits extremely accurate measurements. Optical interferometry has been used as a laboratory technique for almost a hundred years. However, several new developments have extended its scope and accuracy and have made the use of optical interferometry practical for a very wide range of measurements.

The most important of these new developments was the invention of the laser. Lasers have removed many of the limitations imposed by conventional light sources and have made possible many new interferometric techniques.

Key points

- Laser technologies are one of the most crucial in modern science;
- Application of lasers is widespread: from medical to production systems;
- The course provides unique information about laser navigation equipment, including practical skills;
- In lots of applications laser measurement systems are the most accurate, thus making them extremely important;
- Our department has considerable experience in this field, as well as several laboratories and various specific equipment.

Specializations within this programme