Photonics is a discipline concerning the control of light and its technological applications. Light is electromagnetic radiation of wavelengths in the range from 300 mm to 30 nm, generally divided into infrared, visible, and ultraviolet regions (however, the main applications of photonic devices are in the narrower range of visible and near infrared wavelengths). The wave nature of light is very important in the function of photonic devices (specifically, for transmission and modulation of light). This course focuses on the study of the elementary properties of electromagnetic waves.

Maxwell’s equations in vacuum. Wave equation.

Degree competences to which the content contributes:

Qualification system

60 % written exam
40 % problems and exercises during the course

Regulations for carrying out activities

The usual in University teaching
32045 - EW - Electromagnetic Waves

Bibliography

Basic:

Complementary: