



KAPITAŁ LUDZKI
NARODOWA STRATEGIA SPÓJNOŚCI

UNIA EUROPEJSKA
EUROPEJSKI
FUNDUSZ SPOŁECZNY



Optoelectronics

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Optoelectronics course teaches the basic physics and engineering of laser based optical devices for science and various applications. Nine course units explain physical principles stressing understanding, but also paying attention on pragmatic approach by involving enough examples to provide practical knowledge. This brings it up to date with current research and development in the industry.

The student do need some background in calculus, basic problems in electricity, magnetism, electromagnetic field, and also some optics background.

The main subjects covered are: the generation of coherent light - optical amplification and resonators, pulsed sources and ultra-short pulse generation, mostly used lasers and application examples; light detection and noise, optical detectors; optical data storage and devices; elements of waveguide and couple mode theory; fiber optics, signal transmission, modulation, multiplexing and related devices, optical data transmission.