

Title Optical Communication	Code 1018071510108310155
Field Electronics and Telecommunications	Year / Semester 3 / 5
Specialty -	Course core
Hours Lectures: - Classes: - Laboratory: 2 Projects / seminars: 1	Number of credits 4
	Language polish

Lecturer:

dr inż. Zbigniew Szymański
Katedra Systemów Telekomunikacyjnych i Optoelektroniki
e-mail: zszyma@et.put.poznan.pl

Faculty:

Faculty of Electronics and Telecommunications
ul. Piotrowo 3A
60-965 Poznań
tel. (061) 665-2293, fax. (061) 665-2572
e-mail: office_det@put.poznan.pl

Status of the course in the study program:

Obligatory course for students of Electronics and Telecommunications.

Assumptions and objectives of the course:

To make the students familiar with properties of elements and modules of optical communication

Contents of the course (course description):

Principles of light propagation. Step index, graded index, and single-mode optical fibers, numerical aperture and acceptance angle. Modes in optical waveguides. Mode and chromatic dispersion. Transmission characteristics. Non-linear effects. Methods of measuring attenuation and dispersion. Optical fibre cables, installation principles. Connecting fibres, joints and connectors. Optical sources, light-emitting and laser diodes, principles of operation, parameters. Photodiodes and optical receivers. Basic elements of an optical transmission system. Design principles. The idea of WDM, WDM couplers, optical filters.

Introductory courses and the required pre-knowledge:

Basic knowledge of electromagnetic wave propagation and the bases of semiconductors operation.

Courses form and teaching methods:

Lectures, laboratories and projects.

Form and terms of complete the course - requirements and assessment methods:

Tests, individual projects, and written exam.

Basic Bibliography:

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Additional Bibliography:

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