Poznan University of Technology
Faculty of Electronics and Telecommunications

European **C**redit **T**ransfer **S**ystem

Title	Code
Telecommunications systems and networks	**1018011610108320277**

Field	Year / Semester
Electronics and Telecommunications	**3 / 6**

Specialty	Course
-	**core**

Hours	Number of credits
Lectures: **4** Classes: **-** Laboratory: **-** Projects / seminars: **15**	**0**

	Language
	polish

Lecturer:

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Status of the course in the study program:

> Obligatory course for students of Electronics and Telecommunications

Assumptions and objectives of the course:

> Making students familiar with telecommunications services and networks types and their future development

Contents of the course (course description):

> Telecommunication systems and telecommunication networks. Telecommunication services. Transfer modes in telecommunication networks. Types of telecommunication networks. Functional devices. Network topologies. Network layered model. OSI Reference Model. Transport networks SDH, WDM i DWDM. Telephone and ISDN networks. Mobile networks. Broadband networks. Data networks and Internet. Telecommunication services: types, calssification, QoS parameters. Sygnalling in telecommunication networks: function and types, subscriber and interoffice sygnalling, DSS1, SS7, sygnalling in mobile and broadband networks. Switching nodes function and types. Switching neodes architectures. Telephone exchanges, mobile switching office, ISDN. Switching elements and switching fabrics. ATM switches and IP routers. Optical cross-connect systems. Principle terminology in tletraffic theory. Future of telecommunication networks.

Introductory courses and the required pre-knowledge:

> Basics of telecommunications

Courses form and teaching methods:

> Lectures, projects

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

> Individual projects, written exam

Basic Bibliography:

> -

Additional Bibliography:

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