| Title Integrated networks                                         | Code<br>1010801161010800082 |
|-------------------------------------------------------------------|-----------------------------|
| Field Electronics and Telecommunications                          | Year / Semester 3 / 6       |
| Specialty -                                                       | Course                      |
| Hours Lectures: 2 Classes: - Laboratory: 1 Projects / seminars: - | Number of credits 0         |
| , , , , , , , , , , , , , , , , , , ,                             | Language polish             |

#### Lecturer:

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# Status of the course in the study program:

Obligatory at Electronics and Telecommunications.

## Assumptions and objectives of the course:

Making students familiar with construction, functions and operations of integrated networks and services offered in these networks.

#### Contents of the course (course description):

Idea of integrated networks. Switching methods used in telecommunications networks: circuit switching, packet switching, fast packet switching (ATM). Switching nodes in integrated networks. ISDN: functions, reference configurations, user network interfaces. Principles of signalling systems in ISDN. Broadband networks: functions, ATM technique, user network interfaces in broadband networks. Switching networks: classification. Time-division and space-division switches, time-division switching networks. ATM switching elements and switching fabrics. Photonic switches and their use in photonic switching systems. Subscriber line interface circuits in switching nodes. Concentration units. Control elements. Operation and maintenance of switching nodes.

#### Introductory courses and the required pre-knowledge:

Basic knowledge on telecommunication networks

#### Courses form and teaching methods:

Lecture with transparencies. Laboratory include exercises concerning structures of some switching elements, ISDN devices, structure and functions of switching nodes.

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

Exam.

## **Basic Bibliography:**

## Additional Bibliography:

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