

Course: Telecommunication Network Design  
Teachers: Andrzej Kamisiński (andrzejk@agh.edu.pl)  
Studies: Electronics and Telecommunications  
Speciality: Networks and Services  
Semester: 2<sup>nd</sup> sem. MSc stud., Fall  
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## Preparation to the laboratory classes

Piotr Chołda, Andrzej Kamisiński

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### **Network dimensioning and resource allocation based on discrete programming using CPLEX/OPL (2017-12-18)**

#### **Scope of the quiz at the beginning of the class**

You should be familiarized with the material presented during the following lectures:

- Lecture 8: *Discrete programming problems;*
- Lecture 9: *Topology design, dimensioning with modular capacity, linearization of non-linear goal functions.*

#### **How to prepare to the class**

You should revise the following network optimization problems:

- design of network topologies assuming fixed cost values (TDFCM) and installation of the selected links and nodes;
- network design with non-bifurcated traffic flows;
- network design with modular link capacity;
- network design with non-linear cost functions (and linear constraints).