

# Tadeusz Kosciuszko Cracow University of Technology

## Course Card

Faculty of Civil Engineering

Field of study: Civil Engineering

Study profile: general academic

Study form: full-time

Field of study code: BUD

Study cycle: 1st

Specialty: no specialty

### 1 COURSE INFORMATION

Course name	Organizacja, kier. budową i BHP
Course name in English	Construction Supervision, Occupational Safety and Health
Course code	WIL BUD oIS C43 24/25
Course category	Basic
No. of ECTS points	4.00
Semester	6

### 2 CLASS TYPE, NUMBER OF HOURS ACCORDING TO THE STUDY PLAN

Semester	Lecture	Class exercise	Laboratory	Computer lab	Design exercise	Seminar
6	30	15	0	0	30	0

### 3 COURSE OBJECTIVES

**Objective 1** Acquainting students with the basic principles and methods of organizing the construction process and planning construction projects

**Objective 2** Acquainting students with the rights and duties of participants in the construction process in accordance with construction law

**Objective 3** To get students acquainted with the principles of occupational health and safety during construction works, basic threats occurring during the execution of works, rules of conduct in the event of accident and methods of estimating the level of occupational risk

**Objective 4** Preparing students to work in a team to solve problems related to the organization of effective and safe work at the construction site

**Objective 5** Preparation students for scientific work, critical assessment of obtained results and presentation of a given problem regarding planning and organization of a construction project in accordance with health and safety rules

## 4 PREREQUISITES IN TERMS OF KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1 Fundamental knowledge of building technologies and preparing bill of quantities

## 5 LEARNING OUTCOMES

**LO1 Knowledge** Student has knowledge of: principles and methods of planning and organization of construction works, rights and obligations of participants in the construction process, hazards that may occur during the performance of construction works, the principles of health and safety in construction works, methods of occupational risk assessment in construction

**LO2 Skills** The student is able to organize construction works using network models and construction schedules

**LO3 Knowledge** The student is able to identify the basic hazards that may occur during the execution of construction works, analyze the possibilities of their prevention and estimate the level of risk in a basic range  
The student is able to design the development of the construction site according to the safety rules

**LO4 Knowledge** Student is aware of the responsibility for the reliability of the results of their work and their interpretation and can work in a group

## 6 COURSE CONTENT

Class exercise		
No.	Subject matter of the course Detailed description of thematic blocks	No. of class hours
<b>C1</b>	Creating and analyzing networks using the CPM method. Analysis of the critical path. Calculation of simple CPM examples	4
<b>C2</b>	Construction schedules	2
<b>C3</b>	Working sections, works organization methods on the building site	2
<b>C4</b>	Organization of the construction site. Temporary roads on the construction site. Case studies	2
<b>C5</b>	Identification of hazards that may occur during construction works and occupational risk assessment. Documents related to OSH at the construction site.	5

Design exercise		
No.	Subject matter of the course Detailed description of thematic blocks	No. of class hours
<b>P1</b>	Description and assumptions of the project. Presenting the scope of the project.	2
<b>P2</b>	Analysis of construction documentation. Division into working plots	2
<b>P3</b>	Analysis of the technological order of construction works execution	2
<b>P4</b>	Bill of quantities	4
<b>P5</b>	Calculation of the number of work teams and the time of completion of construction works	4
<b>P6</b>	Modeling of the activity network for investments. CPM method and critical path analysis	6
<b>P7</b>	Construction schedules	6
<b>P8</b>	Construction site development plan according to the safety rules	4

Lecture		
No.	Subject matter of the course Detailed description of thematic blocks	No. of class hours
<b>L1</b>	Organization and characteristic of the construction process. Law regulations	2
<b>L2</b>	Methods of organizing construction works. Estimating task execution time.	2
<b>L3</b>	Planning methods and organization of a construction project. Construction Critical Path Method (CPM) and network model analysis	4
<b>L4</b>	Construction schedules - types and rules of performance	2
<b>L5</b>	Health and safety rules at the construction site	8
<b>L6</b>	Construction site development: construction site development elements, their location and order of implementation	4
<b>L7</b>	Health and safety plan. occupational risk assessment	2
<b>L8</b>	Rights and duties of participants in the construction process. Construction documentation	6

## 7 TEACHING TOOLS

**N1** Design exercises

**N2** Discussion

**N3** Multimedia presentations

N4 Lectures

N5 Panel tasks

N6 Films

N7 Consultations

## 8 Student workload

Activity form	Number of hours of activity
<b>Hours realized in contact with the teacher</b>	
Hours resulting from the study plan	75
Consultation hours	4
Exams and tests during session	6
<b>Hours of autonomous student work</b>	
Preparing for classes, studying literature	10
Developing results	5
Preparing of reports, projects presentations, discussion	20
<b>Total number of hours devoted to the subject</b>	<b>120</b>
Total number of ECTS points	4.00

## 9 Methods of grading

### Partial grades

F1 positive grade from the project (design exercise)

F2 positive grade from the test

F3 positive grade from the exam

### Summary grade

P2 Weighted average of forming grades 60%exam+20%design exercise+20% auditorium exercises

### Conditions for passing the course

L1 Positive grades from the design exercise, test and the exam. the student may take the exam after passing all the classes included in the course

### Assessment of activity without teacher participation

B1 design exercise, test and exam