



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Technology of Building Works

### Course

Field of study

Civil Engineering

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

2/4

Profile of study

general academic

Course offered in

Polish

Requirements

compulsory

### Number of hours

Lecture

30

Laboratory classes

0

Other (e.g. online)

0

Tutorials

15

Projects/seminars

15

### Number of credit points

4

### Lecturers

Responsible for the course/lecturer:

dr inż. Paweł Szymański

Responsible for the course/lecturer:

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Wydział Inżynierii Lądowej i Transportu

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### Prerequisites

KNOWLEDGE: The student has a basic knowledge of technology and building materials

SKILLS: Able to obtain information from the literature and other sources. It can combine the information obtained

SOCIAL COMPETENCES: The student should be aware of the consequences of their decisions. Understands the need for learning throughout their working lives. He understands the need for cooperation and teamwork



### Course objective

Transfer of knowledge engineering technology works zero state, raw and finishing and suitability of construction materials at the stage of execution

### Course-related learning outcomes

Knowledge

1. Knowledge of technology works
2. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing

Skills

1. The student can choose equipment for construction works
2. The student can choose the technology and materials for the construction works
3. The student is able to apply the provisions of the construction law and legal acts relating to building structures
4. The student can evaluate the technical condition of building facilities and indicate appropriate methods for their maintenance

Social competences

1. Able to work independently and collaborate as a team on the specific task
2. He is responsible for the accuracy of the results of their work and their interpretation
3. Isolated complements and extends knowledge of modern techniques and technologies

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lectures:

- a written examination

Exercise:

- Test after exercise.

Projects:

- Commitment to and defense of the project

Test, grade scale determined% from:

- 90 very good (A)
- 85 good plus (B)
- 75 good (C)
- 65 sufficient plus (D)
- 55 satisfactory (E)
- below 54 insufficient (F)



## Programme content

### Lectures:

1. Introduction and discussion of the principles of technology works
2. Technology earthmoving
3. Concrete and formwork
4. Erection of steel structures
5. Installation of prefabricated reinforced concrete structures
6. Bricklaying
7. Floors
8. Facades , stucco and dry construction
9. Industrial Floor
10. Roofs and flat roofs
11. Examination

### Exercise :

#### Exercise 1

Rules shortages and calculations bulldozers + calculation example

Rules shortages and calculations scrapers + calculation example

#### Exercise 2

The balance of earth masses

Rules shortages excavators + calculation example

Principles of shortages of transport + calculation example

#### Exercise 3

Rules shortages cranes + calculation example

Rules for selection of slings + calculation example

#### Exercise 4

Rules shortages formwork , horizontal and vertical partitions + calculation example

Fresh concrete pressure + calculation example

#### Exercise 5

The principles of assembly work and examples of variants

The location of the crane and its work- examples

Landfills and roads - examples

#### Exercise 6

Principles of shortages of materials -insulation , concrete , walls , facades floor in terms of what solutions are acceptable and which are not- examples

#### Exercise 7

Colloquium 45 minutes (test with 30 questions )

## Teaching methods

Multimedia presentation



## Bibliography

### Basic

Aleksander Dyżewski "Technologia i organizacja budowy", Arkady

Andrzej Stefański, Janusz Walczak "Technologia robót budowlanych", Arkady

Praca zbiorowa pod redakcją Władysława Lenkiewicza "Technologia robót budowlanych", Państwowe Wydawnictwo Naukowe

Praca zbiorowa pod redakcją Włodzimierza Martinka "Technologia robót budowlanych", Oficyna Wydawnicza Politechniki Warszawskiej

### Additional

Wł. Martinek, M. Książek, W. Jackiewicz- Rek "Technologia robót budowlanych. Ćwiczenia projektowe", Oficyna Wydawnicza Politechniki Warszawskiej

## Breakdown of average student's workload

	Hours	ECTS
Total workload	100	4,0
Classes requiring direct contact with the teacher	60	2,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) <sup>1</sup>	40	2,0

<sup>1</sup> delete or add other activities as appropriate