



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Technology of Earth and Road Works

### Course

Field of study

Year/Semester

Construction and Exploitation of Means of Transport

1/1

Area of study (specialization)

Profile of study

Machines

general academic

Level of study

Course offered in

Second-cycle studies

Polish

Form of study

Requirements

part-time

compulsory

### Number of hours

Lecture

Laboratory classes

Other (e.g. online)

18

0

Tutorials

Projects/seminars

9

0

**Number of credit points**

3

### Lecturers

Responsible for the course/lecturer:

Responsible for the course/lecturer:

dr hab. inż. Jaroslaw Selech prof. PP

mail: jaroslaw.selech@put.poznan.pl

tel. 61 665 22 27

ul. Piotrowo 3, 60-965 Poznań

### Prerequisites

Knowledge:

Has a general mathematical and physical vision and knows the general construction of earthmoving and road machinery.

Skills:

He can use a computer in the field of office software

Social competences

He knows a foreign language



## Course objective

Get to know the basic technologies of earth and road works.

## Course-related learning outcomes

### Knowledge

Student knows the technologies of earth and road works in the field of preparatory works, the technologies of bituminous mass preparation, the technologies of paving and finishing works and the technologies of aggregate production

### Skills

Student can develop technological processes for the production of aggregates, concrete and bituminous masses. He can select machines for technological processes of road construction

### Social competences

The student is able to cooperate in a group and shows independence in solving problems, acquiring and improving the acquired knowledge and skills

## Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Partial grades:

Assessment of student activity during lectures.

Summative assessment:

Assessment taking into account the activity of students during the classes and a written exam on the material

## Programme content

Technology of mechanized road works. Types and application of mechanization and transport coefficients and indicators. Complex mechanization method. The cost of machinery work. Technical operation of road machinery. Road transport. Machines for loading and local transport. Technology and mechanization of preparatory works and earthworks. Technology and mechanization of works in soil stabilization. Technology and mechanization of surface works. Construction of bituminous surfaces. Machines and equipment for the production of paving compounds and paving construction. Construction of cement concrete pavement. Production of concrete mass. Machines and equipment for concrete works. Technology and mechanization of works in auxiliary production. Preparation of aggregate in bases. Technology and mechanization of repair of bituminous and cement concrete pavements.

## Teaching methods

1. Lecture with multimedia presentation
2. Exercises - solving problems



## Bibliography

### Basic

1. Organizacja budowy asfaltowych nawierzchni drogowych. W. Martinek, Z. Tokarski, K.z Chojnacki. Wydawnictwo Naukowe PWN, 2012
2. Budownictwo drogowe w zarysie. A. Sieniawska-Kuras, KABE 2010,
3. Podstawy organizacji robót drogowych. Praca zbiorowa pod red. S. Biruka, Wydawnictwo Naukowe PWN 2007.

### Additional

1. Roboty ziemne i rekultywacyjne w budownictwie komunikacyjnym, K. Piechowicz i inni, WKŁ 2011
2. Datka S.: Drogowe roboty ziemne. Warszawa 1979, WKiŁ

## Breakdown of average student's workload

	Hours	ECTS
Total workload	60	3,0
Classes requiring direct contact with the teacher	45	2,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) <sup>1</sup>	15	1,0

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