



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Fundamentals of road construction [S1BZ1E>PBD]

### Course

Field of study

Sustainable Building Engineering

Year/Semester

3/6

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-cycle

Course offered in

English

Form of study

full-time

Requirements

compulsory

### Number of hours

Lecture

15

Laboratory classes

0

Other (e.g. online)

0

Tutorials

0

Projects/seminars

15

### Number of credit points

2,00

### Coordinators

dr inż. Marcin Bilski

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### Lecturers

### Prerequisites

Knowledge of mathematics and basic concepts related to construction.

### Course objective

Acquisition by the Student of basic knowledge and skills in road construction and road design

### Course-related learning outcomes

empty

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Credit for lectures in the form of a single-choice test (closed questions). The credit threshold is 50%. Passing of projects consists in the execution of design documentation of a road section. The grade is determined by the manner (quality and correctness of the prepared) execution of the design documentation in accordance with the requirements of the subject.

## Programme content

Discuss basic issues related to road construction. Perform a design exercise using CAD software.

## Course topics

### Lecture 1

General characteristics of road pavements.

### Lecture 2

Introduction to road design.

### Lecture 3

Route in plan.

### Lecture 4

The navelette.

### Lecture 5

Design of curves for the route in plan and the keeline.

### Lecture 6

Other elements of the road.

### Lecture 7

Credit

### Projects 1

General characteristics of road surfaces.

### Projects 2

Introduction to road design.

### Projects 3

Route in plan.

### Projects 4

Riviera.

### Projects 5

Design of curves for the route in plan and the keystone.

### Projects 6

Other elements of the road.

### Projects 7

Handover of design documentation.

## Teaching methods

Lecture: multimedia presentation

Project exercises: multimedia presentation. instructional videos.

## Bibliography

Basic

1 Ordinance of the Minister of Transport and Maritime Economy of March 2, 1999 on

Technical conditions to be met by public roads and their location, consolidated text

Journal of Laws of 2016, item 124 (selected fragments of the ordinance are translated into English)

Supplementary

1. E. J. Yoder, M. W. Witczak, Principles of Pavement Design, John Wiley & Sons, 2008

2 A.T. Papagiannakis, E.A. Masad, Pavement Design and Materials, John Wiley & Sons, 2008.

## Breakdown of average student's workload

	Hours	ECTS
Total workload	0	0,00
Classes requiring direct contact with the teacher	0	0,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	0	0,00