

Title Technology of road works	Code 1010101161010120264
Field Civil Engineering First-cycle Studies	Year / Semester 3 / 6
Specialty Road and Motorway Engineering	Course elective
Hours Lectures: 2 Classes: - Laboratory: - Projects / seminars: 1	Number of credits 5
	Language polish

Lecturer:

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Status of the course in the study program:

-The core (special and obligatory) course for students of Civil Engineering First-cycle Studies, faculty of Civil and Environmental Engineering, speciality: Road and Motorway Engineering.

Assumptions and objectives of the course:

-Objective of the course is to get students acquainted with the technology of road and street pavement building including regulations in regard to acceptance of works. Students will acquire knowledge within the scope of structural design of road pavements.

Contents of the course (course description):

-Proceeding principles in choice of recommended structures of the road pavements according to the Polish standards (i.e. the technical requirements for Polish public roads). Ultimate criteria (limiting states) of load capacity, admissible vehicle axle loads for road pavement, ultimate criteria of suitability for road use. The technical requirements to which the road pavements should be corresponded. Types of structures of the road pavement. Configurations (layout) of the road layers. Methods of consolidation of the road subgrade. Manners of stabilisation of soils (the wet mix soil, the cement, lime, hydraulic fly-ash and blast-furnace granulated slag stabilized soils). Road foundations (the drystone sub-base, the sub-bases of bitumen bound sand, lean-mix concrete and bituminous concrete). The base, regulating and reinforcing course of bituminous concrete. The bituminous concrete pavements and the pavements with increased resistance to plastic strains. Factors having an effect on compaction of coated materials (blacktops). The rolled asphalt pavement. The thin wearing course (Hot-Mix Asphalt). The pavements of Stone Mastic Asphalt, sand asphalt and Belgian block. The soil-surfaced road. The drystone and gravel roads. The sett and concrete cube paving. The concrete pavement. The pavements for footways and cycle tracks. Typification of structures of the pavements. Technologies of pavement buildings. Principles of making acceptances of road works.

Introductory courses and the required pre-knowledge:

-Basic knowledge of the Roads and streets, the Road materials and pavements technology and the Motorways in accordance with study programme.

Courses form and teaching methods:

-Lectures illustrated by audiovisual method. Technical excursions.

Form and terms of complete the course - requirements and assessment methods:

-Written examination. Attestation of design exercises including components of building project.

Basic Bibliography:

Additional Bibliography: