COURSE DESCRIPTION CARD - SYLLABUS

Course name

Basics of road and municipal systems

Course

Field of study

Construction and exploitation of means of transport

Year/Semester

1/2

Area of study (specialization)

Road Transport

Profile of study

general academic

Level of study

Second-cycle studies

Course offered in

Polish

Form of study

full-time

Requirements

elective

Number of hours

Lecture

30

Laboratory classes

0

Other (e.g. online)

0

Tutorials

15

Projects/seminars

0

Number of credit points

3

Lecturers

Responsible for the course/lecturer:

PhD ENG Jakub Kowalczyk

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tel. 61-665 2248

Faculty of Civil and Transport Engineering

3 Piotrowo street, 60-965 Poznan

Responsible for the course/lecturer:

PhD ENG Dariusz Ulbrich

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3 Piotrowo street, 60-965 Poznan

Prerequisites

Has general mathematical and physical knowledge and knows the general construction of road transport means. Also student knows the classification of transport means. Student can use a computer in the scope of office software. Collaboration and group work. Correct identification of problems and approach to solving dilemmas.

Course objective

Knowledge of road and communication systems in the country and in the world. Understanding the trends in the development of road and municipal systems.

Course-related learning outcomes

Knowledge

Student knows the goals and principles of management, supervision and control of transport systems.

Student knows the methods of traffic control.

Skills

Student can manage the team's work.

Student can interact with other people as part of team work and take a leading role in teams.

Social competences

Student is ready to critically evaluate knowledge and receive knowledge.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Written exam in the field of lecture. Final test in the field of blackboard exercises.

Programme content

System approach to transport - general principles of systems theory in relation to transport. Comprehensive movement study. Traffic generation. Accompanying tests. Measurement of the volume of passenger transport by public transport. Measurements of traffic. Cartograms. Traffic planning. Traffic distribution in the network. The basic elements of the bandwidth theory. Taking into account many roads, compilation of distance and time in road resistance, the impact of limited bandwidth. Research and traffic measurements. Complex research. Statistical research. Monitoring. Measurement techniques. Speed measurement. Segregation and traffic safety. Traffic control systems and devices. Traffic lights.

Teaching methods

Lecture with a multimedia presentation, study classes

Bibliography

Basic

Gaca S., Suchorzewski W., Tracz M., Inżynieria ruchu drogowego, teoria i praktyka, Warszawa, WKiŁ, 2008 / 2014.

Gajda J, Sroka R., Stencel M., Żegleń T., Burnos P., Piwowar P., Pomiary parametrów ruchu drogowego, Kraków, Wydawnictwa AGH 2012.

Additional

Komar Z., Wolek C., Inżynieria ruchu drogowego - wybrane zagadnienia, Wrocław, WPW 1994.

Breakdown of average student's workload

	Hours	ECTS
Total workload	60	3,0
Classes requiring direct contact with the teacher	45	2,5
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) [1]	15	0,5

[1] delete or add other activities as appropriate