COURSE DESCRIPTION CARD - SYLLABUS

Course name
Public transportation [S2Trans1-TrD>TP]

Course

Field of study
Transport

Year/Semester
1/2

Area of study (specialization)
Road Transport

Profile of study
general academic

Level of study
second-cycle

Course offered in
Polish

Form of study
full-time

Requirements
compulsory

Number of hours

Lecture
30

Laboratory classes
0

Other
0

Tutorials
0

Projects/seminars
0

Number of credit points

2,00

Coordinators

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Lecturers

Prerequisites

Knowledge: Student has basic knowledge concerning transportation systems and processes. He/she acquired knowledge about different transportation modes. Skills: Student can analyze and evaluate transportation systems; understands the phenomena taking place in there systems and can interpret them. Student is able to classify transport. Social competencies: Student is aware of the role and the Impact of transport on the environment.

Course objective

Getting student acquinted with the notion of public transportation processes and phenomena associated with it; presenting rules and standards of public transportation operations in the world; evaluation of public transportation systems.

Course-related learning outcomes

Knowledge:
Student knows advanced methods, techniques and tools used in solving complex engineering tasks and conducting research in a selected area of transport
Student has knowledge of development trends and the most important new achievements of means of

transport and other selected related scientific disciplines.
Student knows economical, legal aspect etc. activities of public transport companies.

Skills:
Student is able to acquire information from literature, databases and other sources (in Polish and English), integrate them, make their interpretation and critical evaluation, draw conclusions and formulate and fully justify opinions
Student is able to use information and communication techniques used in the implementation of projects in the field of transport.

Social competences:
Student understands the importance of using the latest knowledge in the field of transport engineering in solving research and practical problems.
Student is aware of the need to develop professional achievements and observe the rules of professional ethics.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Learning outcomes presented above are verified as follows:
Lectures: assessment of the student activity during lectures and exam in the form of a test of choice (about 10 questions/tasks, min. 50%)

Programme content

1. History and importance of public transport.
2. Quality in public transport.
3. Regulating public transport.
4. Public transport planning.
5. solving decision-making problems in public transport.
6. Modern public transport solutions.

Course topics

1. Concept and characteristics of public transport: introduction to public transport. Essence of the concept and main features of public transport, basic definitions on public transport, history of public transport.
2. Key legislation in the organisation of public transport.
3. Phenomena occurring in public transport.
4. The concept of quality in public transport. Criteria and principles for assessing transport quality.
5. Timetable planning in public transport.
6. Design of public transport at different levels of local government units.
7. Designing public transport schemes.
Integration of public transport.
8. Interaction between organiser and operator of public transport.
9. Examples of public transport solutions using bus rapid transit as an example.
10. Interaction of individual and collective transport. Examples, solutions.

Teaching methods

Lecturer: multimedia presentation, discussion, case study, problem solving

Bibliography

Basic
Fierek S.: Integracja transportu miejskiego z wykorzystaniem symulacji ruchu i wielokryterialnego wspomagania decyzji. Rozprawa doktorska. Politechnika Poznańska 2013.
Kiciński M.: Wielokryterialne harmonogramowanie obsług i napraw w przedsiębiorstwie publicznego transportu autobusowego. Rozprawa doktorska. Politechnika Poznańska 2012
Madej B., Pruciak K., Madej R.: Publiczny transport miejski – Zasady tworzenia rozkładów jazdy. Akademia Transportu i Przedsiębiorczości, Warszawa 2015.
Starowicz W.: Jakość przewozów w miejskim transporcie zbiorowym: podręcznik dla studentów wyższych

szkół technicznych. Politechnika Krakowska im. Tadeusza Kościuszki, Kraków 1990.
Szczerbaciuk Z.: Vademecum: co należy wiedzieć o zmianie systemu funkcjonowania drogowego transportu zbiorowego od dnia 1 stycznia 2017 r. Polska Izba Gospodarcza Transportu Samochodowego i Spedycji, 2015
Additional
Ceder A.: Public Transit Planning and Operation. Theory, Modelingand Practice. Wydawnictwo Elsevier 2015.
GravaS.: Urban Transportation Systems. Urban Transportation Systems. Choices for Communities. McGraw-Hill 2004
Iles R.: Public Transport in Developing Countries. Wydawnictwo Elsevier 2005.
Molecki B.: Rola samorządu w kształtowaniu transportu regionalnego w Polsce i w Europie. Oficyna Wydawnicza PWr, Wrocław 2010
Rudnicki A.: Jakość komunikacji miejskiej.Wydawnictwo SITK, Kraków 1999.
Schöbel A.: Optimization in Public Transportation. Stop Location, Delay Management and Tariff Zone Design in a Public Transportation Network. Wydawnictwo Springer 2007

Breakdown of average student's workload

	Hours	ECTS
Total workload	60	2,00
Classes requiring direct contact with the teacher	30	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	30	1,00