



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Industrial design in vehicle design

### Course

Field of study

Year/Semester

Construction and Exploitation of Means of Transport

2/3

Area of study (specialization)

Profile of study

Railway Vehicles

general academic

Level of study

Course offered in

Second-cycle studies

Polish

Form of study

Requirements

full-time

compulsory

### Number of hours

Lecture

Laboratory classes

Other (e.g. online)

15

0

Tutorials

Projects/seminars

### Number of credit points

1

### Lecturers

Responsible for the course/lecturer:

Responsible for the course/lecturer:

Mikołaj Wojtkowiak

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### Prerequisites

Knowledge: The student has basic knowledge of the construction of public transport vehicles as well as the design of vehicles and their components

Skills: The student has basic skills of finding and interpreting information on a chosen topic, he or she can present his or her knowledge.

Social competences: The student is able to cooperate in a group, assuming different roles in it. The student is able to identify priorities important in solving tasks.

### Course objective

The students acquire basic knowledge of user-based design, practice design intuition and good practices to broaden their horizons.

### Course-related learning outcomes

Knowledge

The student knows good and bad examples of design solutions in public transport vehicles.



The student has knowledge of the most important achievements in the field of public transport.

He or she has knowledge of safety and ergonomics principles in vehicle design and the threats that machines pose to the environment.

#### Skills

The student is able to critically assess elements and the whole of designed objects.

#### Social competences

The student has knowledge about the positive and negative effects of making specific design decisions. He knows the role of a designer in the modern world.

#### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

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The students prepare a Case Study in the form of presentations on public transport systems, which are discussed during the classes.

#### Programme content

What is design? What is good design?

The role of a designer in the public transport vehicles market.

A model design process - from a tender to a vehicle handover, from concept design to optimization.

Overview of mass transport vehicles for industrial design.

Good and bad examples of integrated transport systems.

#### Teaching methods

Conversational lecture.

#### Bibliography

Basic

Tim Brown: Zmiana przez design, Wrocław 2013, ISBN 978-83-64275-01-2

Additional

Olga Gitkiewicz: NIE ZDAŻĘ, Warszawa 2019, ISBN 978-83-65970-39-8

Additional

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### Breakdown of average student's workload

	Hours	ECTS
Total workload	30	1,0
Classes requiring direct contact with the teacher	15	0,5
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) <sup>1</sup>	15	0,5

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