COURSE DESCRIPTION CARD - SYLLABUS

Course name
Equipment of means of transport [S2Trans1-TrCh>WŚT]

Course

Field of study
Transport

Year/Semester
1/1

Area of study (specialization)
Refrigerated 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
15

Laboratory classes
15

Other
0

Tutorials
0

Projects/seminars
0

Number of credit points

2,00

Coordinators

dr hab. inż. Arkadiusz Stachowiak prof. PP
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Lecturers

Prerequisites

KNOWLEDGE: has a basic knowledge of body design solutions SKILLS: is able to design an isothermal body for transporting food SOCIAL COMPETENCES: understanding the need to acquire the transferred knowledge, is aware of responsibility for their work

Course objective

Presentation of the role of additional equipment for isothermal (refrigerated) bodies for the effective implementation of food transport in controlled temperature conditions.

Course-related learning outcomes

Knowledge:
Student has advanced detailed knowledge of selected issues in the field of transport engineering
Student has knowledge about development trends and the most important new achievements of means of transport and other, selected, related scientific disciplines

Skills:
Student is able to make a critical analysis of existing technical solutions and propose their improvements

(improvements)

Social competences:
Student understands the importance of using the latest knowledge in the field of transport engineering in solving research and practical problems

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Learning outcomes presented above are verified as follows:
Ongoing monitoring of preparation (discussion) and activity in the classroom. Compulsory report on each laboratory activity.

Programme content

General design characteristics of means of transport intended for transporting food in controlled temperature conditions. Multitemperature bodies in the transport of food products (design solutions for bodies and cooling units). The use of photovoltaics in cooling bodies. Alternative refrigeration equipment for use in food transport. Temperature monitoring in refrigerated bodies (legal requirements, technical solutions). Isothermal tanks - design characteristics, selected operational issues. Specialized bodies - presentation of selected cases.

Course topics

none

Teaching methods

1. Lecture with multimedia presentation
2. Laboratory exercises - solving project tasks

Bibliography

Basic
1. Bieńczak K., Modelowanie warunków termicznych chłodniczego przewozu żywności. Wydawnictwo Politechniki Poznańskiej, Poznań, 2009.
2. Zwierzycki W., Bieńczak K. [red.] Pojazdy chłodnicze w transporcie żywności, Systherm Serwis, Poznań 2006.
3. Starkowski D., Bieńczak K., ZwierzyckiW.,Samochodowy transport krajowy i międzynarodowy kompendium wiedzy praktycznej T. 1, Zabezpieczenia ładunków oraz zagadnienia techniczno-eksploatacyjne w transporcie drogowym Poznań : Systherm D. Gazińska, 2010
Additional
1. Z. Korzeń (red): Logistyka w transporcie towarów Oficyna wydawnicza Politechniki Wrocławskiej 1998.

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