



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Packaging

		Course
Field of study		Year/Semester
Mechanics and vehicle construction		1/1
Area of study (specialization)		Profile of study
Refrigerated 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	0
Tutorials	Projects/seminars	
15	0	
Number of credit points		
2		

		Lecturers
Responsible for the course/lecturer:		Responsible for the course/lecturer:
dr inż. Karolina Perz		dr hab. inż. Łukasz Wojciechowski
email: aleksandra.rewolinska@put.poznan.pl		email: Lukasz.Wojciechowski@put.poznan.pl
tel. 61 665-2391		tel. 61 665 2376
		Wydział Inżynierii Lądowej i Transportu
		ul. Piotrowo 3, 60-965 Poznań

		Prerequisites
Knowledge:		
1. Basic knowledge of the physicochemical properties of food products;		
2. Knowledge of modern technological solutions for food production;		
3. Knowledge of typical construction materials and methods of their shaping and processing;		
Skills:		
1. Can design a simple technological process for the production of basic products		



food;

2. Can select appropriate elements of the production line in the processing / production processes

food;

Social competence:

1. Understands the role of the engineer in the food production process;

2. Understands the interaction aspect between packaging materials and the environment;

Course objective

To acquaint students with the applicable terminology and criteria for the division of packaging. Features and purpose of packaging in the context of application in the food industry in terms of both production as well as transport and storage. Packaging devices as elements of production lines in food industry and direct use of packaging in various branches of this industry.

Course-related learning outcomes

Knowledge

Has basic knowledge about selected technologies of machine works in agriculture, construction, transport, food industry, etc.

Has extended knowledge of the standards for working machines in the field of methods of calculating and testing machines, safety, including road safety, environmental protection as well as mechanical and electrical interface.

He knows the main development trends in the field of mechanical engineering.

Skills

He can estimate the potential threats to the environment and people from the designed working machine and vehicle from a selected group.

Is able to use the acquired knowledge in the field of thermodynamics and fluid mechanics to simulate thermodynamic processes in technological systems of machines, using specialized computer programs.

He can design the technology of exploitation of a selected machine with a high degree of complexity.

Social competences

It is ready to fulfill social obligations, inspire and organize activities for the benefit of the social environment.

It is ready to initiate actions for the public interest.

Is willing to think and act in an entrepreneurial manner.



Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Credit: written test

Programme content

Definition and classification of packaging. Protection, information, logistic and marketing functions packaging. Packaging material properties regulations and information requirements given on food packaging or labels. Glass, metal and plastic packaging stationery, plastic. Quality changes during food storage. Fixation food. Transport packaging and loading units. Food packaging certification. Systems food packing. Selected food products and examples of their packaging. Ecological aspects packaging. New trends in food packaging.

Teaching methods

1. Lecture with multimedia presentation

Bibliography

Basic

1. Opakowania żywności, Praca zbiorowa, Agro Food Technology, Czeladź 1998
2. Korzeniowski A., Skrzypek M., Szyszka G., Opakowania w systemach logistycznych, Biblioteka Logistyka, Poznań 2001
3. Korzeniowski A., Skrzypek M., Ekologistyka zużytych opakowań, Biblioteka Logistyka, Poznań 2001

Additional

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,0
Classes requiring direct contact with the teacher	30	1,0
Student's own work (literature studies, preparation for tutorials, preparation for tests) ¹	20	1,0

¹ delete or add other activities as appropriate