

Course name: *Packing, storage and transport of food products*

**COURSE NAME (capital letters) PACKING, STORAGE AND TRANSPORT OF FOOD PRODUCTS**

ECTS	2
Course status	obligatory
Course final assesement/evaluation of outcomes	exam
Prerequisites	no prerequisites

**Main field of study:**

**field of study name (capital letters)**

Profile of study	Academic
The code of studies (education level)	SM (master)
Semester of studies	summer/winter
Language of instruction	English

**Course offered by:**

Name of faculty offering the course	Faculty of Food Technology
Name of department offering the course	Department of Human Nutrition and Dietetics
Course coordinator	Joanna Kapusta-Duch, Ph. D., D. Sc., Eng

**Learning outcomes of the course:**

Symbol of outcome	Description of learning outcome	Reference to	
		main field of study outcomes	discipline#** *
<b>KNOWLEDGE – student knows and/or understands:</b>			
PST2_W1	the basic concepts of novelties knowledge of the packaging, storage and transport of food	TŻ2_W01 TŻ2_W02	01.3
PST2_W2	the basic and non-standard material of packaging and their role in the food industry	TŻ2_W01 TŻ2_W02	01.3
<b>SKILLS – student is able to:</b>			
PST2_U1	make the selection of the tests packaging and packaging materials and assess their ae	TŻ2_U03	01.3
PST2_U2	know basic packaging systems	TŻ2_U03	01.3
<b>SOCIAL COMPETENCE- student is ready to:</b>			
PST2_K1	be active during the discussion of various issues related to food packaging	TŻ2_K03	01.3

**Teaching contents:**

<b>Lectures</b>	<b>15</b>	<b>hours</b>
Situation and changes in the packaging industry		
Labeling and coding of packages		
News in the field of plastic packaging		

Topics of the lectures	Novelties in the field of paper packaging material
	New Products in the field of metal packaging material
	News in the field of glass packaging material
	Biodegradation
	Active and intelligent packaging

Accomplished learning outcomes	PST2_W1; PST2_W2; PST2_K1
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Verification methods, rules and criteria of outcome assessment	Written exam (assessment positive for min. 51% points). The participation of the lecture pass mark in the final evaluation is 60%.
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<b>Classes</b>	<b>15</b>	<b>hours</b>
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Topics of the classes	The evaluation and testing of the physical, mechanical, and chemical properties of various packaging material
	Evaluate the accuracy of labeling
	Testing of promotional packaging features
	Packaging systems

Accomplished learning outcomes	PST2_U1; PST2_U2; PST2_K1
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Verification methods, rules and criteria of outcome assessment	Two tests in the field of classes (assessment positive for min. 51% points). Participation in the final evaluation of the module 40%.
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#### References:

Basic	1. Panfil – Kuncewicz H., Kuncewicz A., Juśkiewicz M.. Wybrane zagadnienia z opakowalnictwa żywności. Wyd. UWM. Olsztyn 2012.
	2. Lisińska – Kuśnierz M. Badanie i ocena jakości materiałów opakowaniowych i opakowań jednostkowych. Wyd. AE. Kraków 2005.
Supplementary	1. Emblem A. & Emblem H. (ed.). Packaging technology. Fundamentals, materials and processes. Wyd. PWN. Warszawa 2014.
	2. Żakowska H. Opakowania a środowisko. Wymagania, standardy, projektowanie, znakowanie. Wyd. PWN. Warszawa 2017.

#### Structure of learning outcomes:

Discipline: # (provide appropriate symbol)	2	ECTS**
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Discipline: # (provide appropriate symbol - if the course relates to more than one academic discipline )		
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#### Structure of student activities:

Contact hours	33	hours	1.3	ECTS**
including:				
lectures	15	hours		
classes and seminars	15	hours		
consultations	2	hours		
participation in research	0	hours		
mandatory traineeships	0	hours		
participation in examinations	1	hours		
e-learning	0	hours		
student own work	17	hours	0.7	ECTS**

\* where 10 hours of classes = 1 ECTC (in case of 15 h → 2 ECTS)

\*\* stated with an accuracy to 0.1 ECTS, where 1 ECTS = 25 - 30 hours of classes

# academic discipline code: RZ - animal science and fishery, PB - biological sciences, etc.