Product development with packaging and safety aspects – blending course

Educational subject description sheet

Basic information

Field of study Course Offer for exchange students - first degree studies (BA programmes) **Speciality** - **Organizational unit** Course Offer for exchange students **Study level** first degree studies (BA programmes) **Study form** full-time studies **Education profile** General academic	**Didactic cycle** 2024/25 **Subject code** PWMPWM1S_D.A100000.06394.24 **Lecture languages** english **Mandatory** Elective subjects **Block** Basic subjects **Disciplines** Food technology and nutrition

Coordinator	Małgorzata Nowacka, Katarzyna Samborska
Teacher	Małgorzata Nowacka, Katarzyna Samborska

Period	**Examination**	**Number of ECTS points**
Winter semester	Exam **Activities and hours** Lecture: 29 Auditorium exercises: 1	4

Goals

Code	Goal
C1	The aim of the course is to broaden students' knowledge about product development, food safety and quality, nutritional value, sensory evaluation, packaging (regulation for food contact materials, safety of the packaging, the sustainability of food packaging, bio-based materials used for packaging, innovations in food packaging technologies, production of biopolymers, new types of packaging from by-products, new types of packaging components - bacterial cellulose, novel packaging - smart and active packaging, ecodesign of food packaging, theoretical aspects of packaging dependence shelf life).

Entry requirements

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Subject's learning outcomes

Code	Outcomes in terms of	Effects	Examination methods
Knowledge – Student knows and understands:			
W1	in-depth properties of raw materials, auxiliaries and food industry products and their ingredients, useful in planning and organizing food production, as well as in storage (food materials and packaging) and food distribution		Test (written or computer based)
Skills – Student can:			
U1	communicate effectively on specialist topics with diverse audiences, participate and conduct debates on professional issues, use a foreign language at the B2+ level of the Common European Framework of Reference for Languages in the field of food packaging and testing of materials intended for contact with food		Test (written or computer based)
Social competences – Student is ready to:			
K1	is aware and understands the need for development in the field issues of the broadly understood food economy, he understands also the constant need to improve their professional qualifications in the development of innovative food products		Test (written or computer based)

Study content

No.	Course content	Subject's learning outcomes	Activities
1.	Product development, food safety and quality, nutritional value, sensory evaluation, packaging (regulation for food contact materials, safety of the packaging, the sustainability of food packaging, bio-based materials used for packaging, innovations in food packaging technologies, production of biopolymers, new types of packaging from by-products, new types of packaging components - bacterial cellulose, novel packaging - smart and active packaging, ecodesign of food packaging, theoretical aspects of packaging dependence shelf life).	W1, U1, K1	Lecture, Auditorium exercises

Course advanced

Activities	Methods of conducting classes
Lecture	E-learning - lecture part
Auditorium exercises	E-learning - exercises part

Activities	Examination method	Percentage
Lecture	Test (written or computer based)	80%
Auditorium exercises	Test (written or computer based)	20%

Activities	Credit conditions
Lecture	Test
Auditorium exercises	Test

Literature

Obligatory

1. Brody, A. L., & Lord, J. B. (Eds.). (2007). Developing new food products for a changing marketplace. CRC Press.
2. Martins V.G., Romani V.P., Martins P.C., Filipini G.D.S. (2019). Chapter 6 - Innovative packaging that saves food. In Saving Food: Production, Supply Chain, Food Waste and Food Consumption Ed. C.M. Galanakis, Academic Press, https://doi.org/10.1016/B978-0-12-815357-4.00006-7
3. Codex Alimentarius - GENERAL PRINCIPLES OF FOOD HYGIENE

Calculation of ECTS points

Activity form	Activity hours*
Lecture	29
Auditorium exercises	1
Preparation for the test	70
Student workload	**Hours** 100
Number of ECTS points	**ECTS** 4

* hour means 45 minutes