



**Course name / code: PACKAGING OF DAIRY PRODUCTS / 03S10-OPM**

ECTS credit allocation (and other scores): 3

Semester: winter semester

Level of study: ISCED-6 - first-cycle program EQF-6

Branch of science: Agricultural sciences

Language: English

Number of hours per semester: 30h classes

Course coordinator/ Department and e-mail: dr inż. Maria Czerniewicz / Department of Dairy Science and Quality Management, [czermar@uwm.edu.pl](mailto:czermar@uwm.edu.pl)

Type of classes: classes

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### **SUBSTANTIVE CONTENT**

**CLASSES:** Vacuum and modified atmosphere packaging - comparative assessment of quality characteristics of dairy products packaged by different methods. Packaging of dairy products on selected packaging machines. Active and intelligent packaging - evaluation of quality characteristics of dairy products packaged using active and intelligent packaging. Aseptic and enhanced hygienic packaging - testing the tightness and impact of unit pack unsealing on dairy product quality. Evaluating the labelling of unit packs of dairy products. Making a packaging design for a selected dairy product (presentation of guidelines for design work). Packaging innovations in the dairy industry (presentation).

**Learning purpose:** To provide knowledge about current trends in dairy packaging. To acquire knowledge about the current rules of dairy packaging labelling. Hence, you will acquire skills for designing dairy packaging. To acquire skills of operating selected packaging machines. Developing skills of proper interpretation of the results of analysis and experiments.

### **ON COMPLETION OF THE STUDY PROGRAMME THE GRADUATE WILL GAIN:**

**Knowledge:** Student knows, understands and characterizes the properties of packaging materials and packaging in terms of their usefulness in shaping the quality, shelf life and safety of dairy products; knows, understands and explains the correctness of the information present on packaging of dairy products; knows and characterises innovative techniques and technologies and packaging used in the dairy industry in relation to product quality and storage stability.

**Skills:** Student can design packaging (type of material, packaging technique, labelling of packaging, management of packaging waste, etc.) for a selected dairy product; can mathematically elaborate the results of the conducted research (basic statistical measures, creation of tables, graphs, diagrams) and formulate conclusions; can assess the correctness of dairy product packaging labelling in accordance with current legislation; can evaluate the innovativeness of packaging and make a presentation; can actively participate in the work of the laboratory and lead a team. He/she is able to organise the division of labour at the research station, cooperate with colleagues from the research team in the preparation of a report and consciously assess the contribution of his/her own work to the overall research task being developed.

**Social Competencies:** Student is ready to discuss the packaging of dairy products; is aware of the importance of social and professional responsibility for the impact of food packaging on its quality, durability and safety; is ready to continuously update knowledge and improve skills in order to adapt to changing requirements.

**Basic literature:**

1) Neil Farmer, Trends in Packaging of Food, Beverages and Other Fast-Moving Consumer Goods (Fmcg): Markets, Materials and Technologies, WOODHEAD PUB 2013

**Supplementary literature**

1) scientific articles from the area of food packaging