

Course name:**FOOD PRODUCT DEVELOPMENT**

ECTS	3,0
Course status	<i>basic, specialisation, optional, obligatory, facultativ</i>
Course final assessment /evaluation of outcomes	<i>Exam</i>
Prerequisite	<i>No prerequisites</i>

Main field of study:**Food Technology**

Educational profile	General academic
Code of studies and education level	SI/one grade
Semester of studies	4/summer
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 Carbohydrate Technology and Cereal Processing
Course coordinator	dr. hab. inż. Magdalena Krystyjan, prof. URK

Learning outcomes:

Symbol of outcome	Description of the learning outcome	Reference to main field of study outcomes	Area symbol*
KNOWLEDGE – student knows and understands			
FPD_W1	the need to create new products. Knows and understands the legal conditions for marketing new products and the issues of new product strategy. Describes the processes involved in the marketing of new items. Understands what promotion and advertising is about. Knows the essence of marketing activities, the value of the brand.	TŻ1_W01 TŻ1_W04 TŻ1_W05 TŻ1_W13 TŻ1_W18	RT
FPD_W2	the stages involved in developing a new food product. Identifies the elements that determine the success and reasons for failure of a new product. Knows the principles of implementing the results of research work on new products. Understands the terms: product life cycle, circle of benefits, price. Is familiar with modern food production technologies.	TŻ1_W04 TŻ1_W05 TŻ1_W13 TŻ1_W18	RT
FPD_W3	problems related to the quality and safety of new products. Indicates the role of packaging and product labeling in the quality of a new product. Presents problems related to the control of the operation of the enterprise. Knows selected aspects of food law related to the introduction of a new product, the use of permitted additives, labeling and the obligation to inform the consumer.	TŻ1_W04 TŻ1_W05 TŻ1_W09 TŻ1_W10 TŻ1_W11 TŻ1_W13 TŻ1_W18 TŻ1_W19	RT
SKILLS – student is able to			

FPD_U1	develop a survey of a new product and interpret the results of the survey and, based on the results, select a product. Knows how to develop a recipe taking into account food laws and regulations and make a product on a laboratory scale.	TŽ1_U04 TŽ1_U06 TŽ1_U09 TŽ1_U10 TŽ1_U11	RT
FPD_U2	present the article by presenting the results of sensory analysis and a detailed analysis of the correctness of the selection of processes and methods.	TŽ1_U01 TŽ1_U02 TŽ1_U03 TŽ1_U04 TŽ1_U09 TŽ1_U12	RT
FPD_U3	based on the assumed production volume, select production equipment, prepare a material balance and cost estimate for the production of a new food item and make a preliminary economic analysis of the project under development. Can design a production safety system for a selected product and a product label in accordance with the requirements of food law.	TŽ1_U04 TŽ1_U05 TŽ1_U06 TŽ1_U07 TŽ1_U08 TŽ1_U09	RT
FPD_U4	apply the principles of health and safety and good practices in the laboratory.	TŽ1_U06	RT
SOCIAL COMPETENCIES – student is ready to:			
FPD_K1	to express objective assessments of his own and the team's work, and to interact and work in a group, taking on different roles within it.	TŽ1_K01 TŽ1_K02	RT
FPD_K2	creative analytical problem solving and organizing a workbench.	TŽ1_K01 TŽ1_K02 TŽ1_K03	RT

Teaching contents

Lectures	15 hours
Topics	<p>Why do we create new products? What is novel food under EU regulations? Product strategy vs. business growth opportunities. Product life cycle, benefit circle, price. The essence of marketing activities, the value of the brand. Legal protection against unfair competition. Stages of new product development. Labeling of food products in light of the latest legislation. Launching new products vs. regulatory requirements. Promoting new products. Advertising. Food safety in the context of regulations. Elements determining the success and reasons for failure of a new product. Modern food production technologies as a reason for developing a new product. Implementation of the results of research work on new products. Official food control systems in light of the requirements of European Union law.</p>
Accomplished learning outcomes	<i>FPD_W1; FPD_W2; FPD_W3; FPD_K1; FPD_K2</i>
Means of verification, rules and criteria of assessment	<i>Credit for exercises on the basis of the presentation of the product on a laboratory scale and a written report on the completed project (the average of the grades obtained) - contribution to the final grade of 50%.</i>
Classes:	15 hours
Topics	

	Ways of searching for an innovative product. Preparation of surveys on the selected product. Development of the composition of an innovative product based on the legislation . Developing a way to manufacture an innovative product in accordance with the letter of the law. Preparation of several versions of the product on a laboratory scale. Sensory evaluation combined with a discussion on the selection of the final form of the new product. Selecting equipment and machinery for the production line. Determination of working time schedule. Identification of suppliers and customers. Development of a production safety system for the selected product in the context of legal regulations. Presentation of the article. Compilation of production costs. Preparation of the label in accordance with legal regulations. Presentation of a written report.
Accomplished learning outcomes	<i>FPD_U1; FPD_U2; FPD_U3; FPD_U4; FPD_K1; FPD_K2</i>
Means of verification, rules and criteria of assessment	<i>Credit for lectures in written form; for a passing grade, correct answers must be given to at least 60% of the questions asked. Contribution to the final course grade - 50%.</i>

References:

Basic	<ol style="list-style-type: none"> 1. Fuller G.W., <i>New Product Development</i>. CRC Press. Boca Raton USA 1994. 2. Dornblaster L., <i>New Product Revenue</i>. FMI Sp. Industry Conventa. Chicago 1994. 3. <i>Materials provided by the teacher</i>
Supplementary	<ol style="list-style-type: none"> 1. Tijskens L., Hertog M., Nicolai B., <i>Food Process Modelling</i>. Ed. Woodhead Publ. Ltd. 2001. 2. Williams A., <i>New Technologies in Food Preservation and Processing</i>. <i>Nutr, Food Sci.</i> 6:16, 1993.

Structure of learning outcomes

Area of academic study: R – Agricultural, forestry and veterinary sciences	ECTS
Area of academic study: T – technological sciences	3,0 ECTS**

Structure of student activity

Contact hours	32	hrs.	1,3	ECTS**
Including:				
lectures	0	hrs.		
classes and seminars	15	hrs.		
consultations	1	hrs.		
participation in research	0	hrs.		
obligatory traineeships	0	hrs.		
participation in examination	1	hrs.		
e-learning	15	hrs.	ECTS**
student own work	43	hrs.	1,7	ECTS**

*Areas of academic study in the fields of: H- humanities; S - social studies; P – biological sciences; T – technological sciences; M- medical, sport and health sciences; R – Agricultural, forestry and veterinary sciences; A – the arts

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