

SYLLABUS

REGARDING THE QUALIFICATION CYCLE FROM 2022 TO 2023

1. BASIC COURSE/MODULE INFORMATION

Course/Module title	Dietetic cakes and confectionery products
Course/Module code *	
Faculty (name of the unit offering the field of study)	Collegium of Natural Science
Name of the unit running the course	Institute of Food Technology and Nutrition
Field of study	Food Technology and Human Nutrition
Qualification level	second-degree studies
Profile	
Study mode	stationary
Year and semester of studies	2022/2023
Course type	lecture and laboratory
Language of instruction	English
Coordinator	dr inż. Greta Adamczyk
Course instructor	dr inż. Greta Adamczyk

* - as agreed at the faculty

1.1. Learning format – number of hours and ECTS credits

Semester (no.)	Lectures	Classes	Colloquia	Lab classes	Seminars	Practical classes	Internships	others	ECTS credits
	10			20					5

1.2. Course delivery methods

- conducted in a traditional way
- involving distance education methods and techniques

1.3. Course/Module assessment (exam, pass with a grade, pass without a grade)

pass with a grade

2. PREREQUISITES

Cereals technology, Human nutrition, Dietetics, Food chemistry

3. OBJECTIVES, LEARNING OUTCOMES, COURSE CONTENT, AND INSTRUCTIONAL METHODS

3.1. Course/Module objectives

O ₁	Introduction to the market proposals in the field of supplementation and substitution of prescription components of pastry products and other confectionery products
O ₂	Indication of the impact of the modification of raw materials to product quality and technological process.
O ₃	Description and make dietary pastry and/or confectionery product.

3.2. COURSE/MODULE LEARNING OUTCOMES (TO BE COMPLETED BY THE COORDINATOR)

Learning Outcome	The description of the learning outcome defined for the course/module	Relation to the degree programme outcomes
LO_01	knows the role of nutritional and biologically active ingredients in cereals and confectionery products and can explain dietary requirements imposed to pastry and confectionery designed for people with various health restrictions	K ₂ _W ₀₁ , K ₂ _W ₀₃ , K ₂ _W ₁₀
LO_02	knows technological processes of pastry and confectionery production	K ₂ _W ₀₅
LO_03	can indicate health-promoting effects of the use of replacements and additions in the production of dietetic pastry and desserts	K ₂ _U ₀₁ , K ₂ _U ₀₆
LO_04	analyses impact of the additional substances on the process technology and is able to select the optimal modifications of standard production parameters	K ₂ _U ₀₅ , K ₂ _U ₀₈
LO_05	student can interact and work in a group to solve technological analytical and technical problems	K ₂ _K ₀₂

3.3. Course content (to be completed by the coordinator)

A. Lectures

Content outline
1. Structural factors and nutritional value of pastry and confectionery products.
2. Dietary requirements imposed to pastry and confectionery designed for people with various health restrictions.
3. Reduced fat and sugar-free pastry and confectionery products and process.
4. Technological processes of pastry and confectionery products

B. Classes, tutorials/seminars, colloquia, laboratories, practical classes

Content outline
1. Dietetic recipe of reduced-calorie cakes - product design and assessment of effect of for the sugar substitutes or mimetics on the quality of products.
2. Dietetic recipe of reduced-calorie pastry - product design and assessment of effect of for the fat substitutes or mimetics on the quality of products.
3. Student's design and make dietary pastry and/or confectionery product - recipe, technology, organoleptic assessment and evaluation of the energy and nutritional values of product.

3.4. Methods of Instruction

Lecture: a lecture supported by a multimedia presentation

Laboratory classes: designing and conducting experiments

4. Assessment techniques and criteria

4.1 Methods of evaluating learning outcomes

Learning outcome	Methods of assessment of learning outcomes (e.g. test, oral exam, written exam, project, report, observation during classes)	Learning format (lectures, classes,...)
LO-01	written exam/test	lectures
LO-02	written exam/test	lectures
LO_03	report, discussion	classes
LO_04	report, discussion	classes
LO_05	observation during classes	classes

4.2 Course assessment criteria

Forms of assessment: laboratory work report and written exam.
 The grade of the subject is determined by the total points of the exam and report.
 Passing exercises (> 50% of the maximum number of points): satisfactory 51-59%, satisfactory plus 60-69%, good 70-79%, good plus 80-89%, very good > 90%.
 Requirement is to reach all learning outcomes.

5. Total student workload needed to achieve the intended learning outcomes

– number of hours and ECTS credits

Activity	Number of hours
Scheduled course contact hours	30
Other contact hours involving the teacher (consultation hours, examinations)	60
Non-contact hours - student's own work (preparation for classes or examinations, projects, etc.)	60
Total number of hours	150

Total number of ECTS credits	5
------------------------------	---

* One ECTS point corresponds to 25-30 hours of total student workload

6. Internships related to the course/module

Number of hours	-
Internship regulations and procedures	-

7. Instructional materials

<p>Compulsory literature:</p> <ol style="list-style-type: none"> 1. Pasha, I. M. R. A. N., Butt, M. S., Anjum, F. M., & Shehzadi, N. (2002). Effect of dietetic sweeteners on the quality of cookies. <i>Int. J. Agric. Biol</i>, 4(2), 245-248. 2. Rodríguez-García, J., Puig, A., Salvador, A., & Hernando, I. (2012). Optimization of a sponge cake formulation with inulin as fat replacer: structure, physicochemical, and sensory properties. <i>Journal of Food Science</i>, 77(2), C189-C197. 3. Gao, J., Brennan, M. A., Mason, S. L., & Brennan, C. S. (2016). Effect of sugar replacement with stevianna and inulin on the texture and predictive glycaemic response of muffins. <i>International Journal of Food Science & Technology</i>, 51(9), 1979-1987. 4. Nourmohammadi, E., & Peighambardoust, S. H. (2016). New concept in reduced-Calorie sponge cake production by xylitol and oligofructose. <i>Journal of food quality</i>, 39(6), 627-633. 5. Renzetti, S., & Jurgens, A. (2016). Rheological and thermal behaviour of food matrices during processing and storage: relevance for textural and nutritional quality of food. <i>Current Opinion in Food Science</i>, 9, 117-125.
<p>Complementary literature:</p> <ol style="list-style-type: none"> 1. Mohammed, I. K., Skamniotis, C. G., & Charalambides, M. N. (2019). Developing Food Structure for Mechanical Performance. <i>Handbook of Food Structure Development</i>, 18, 199.

Approved by the Head of the Department or an authorised person