**SYLLABUS**

**regarding the qualification cycle FROM 2023 TO 2024**

1. Basic Course/Module Information

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| --- | --- |
| Course/Module title | Contemporary trends in functional food production |
| Course/Module code \* |  |
| Faculty (name of the unit offering the field of study) | College of Natural Sciences  Institute of Food and Nutrition Technology |
| Name of the unit running the course | Institute of Food Technology and Nutrition |
| Field of study | Food technology and human nutrition |
| Qualification level |  |
| Profile | General academic |
| Study mode | Part-time |
| Year and semester of studies | Summer semester |
| Course type | Erasmus + program |
| Language of instruction | English |
| Coordinator | Agata Pawłowska PhD |
| Course instructor | Agata Pawłowska PhD |

\* - as agreed at the faculty

1.1.Learning format – number of hours and ECTS credits

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Semester  (n0.) | Lectures | Classes | Colloquia | Lab classes | Seminars | Practical classes | Internships | others | **ECTS credits** |
| Winter |  |  |  | 30 |  |  |  |  | 5 |

1.2. Course delivery methods

- conducted in a traditional way

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

pass with a grade

2. Prerequisites

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| Completed course: general chemistry, food chemistry, food analysis, general food technology |

3. Objectives, Learning Outcomes, Course Content, and Instructional Methods

3.1. Course/Module objectives

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| --- | --- |
| O1 | Familiarization with selected groups of biologically active compounds present in health-promoting foods and their effect on the human body in the light of the latest scientific research. |
| O2 | Familiarization with the types of health-promoting food and methods of their production. Directions development of health-promoting food. |
| O3 | Familiarization with the methods of assessing the quality of health-promoting food. |

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 contemporary trends in bioactive food production. | K\_W02 |
| LO\_02 | Knows biologically active ingredients present in pro-health food and their impact on human health. | K\_W02 |
| LO\_03 | Can search, analyse and use information concerning the health-promoting properties of raw materials, products and additives in the production of bioactive food and actively shaping its specific functions | K\_U04 |

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

1. Lectures

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| Content outline |

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

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| Content outline |
| Smoothies as an example of a health-promoting product. Composing a fruit-based smoothie  and vegetables (e.g. apples and beets) with herbal extracts |
| Composing a smoothie with nuts and seeds. |
| Determination of antioxidant activity of plant materials. |
| Commodity characteristics of low-calorie foods. Low-calories product additives. Comparison of the nutritional value of a traditional and low-calorie product. |
| Substitutes for fat and sugar in baking. Baking and evaluation of biscuits with reduced calorie content. |
| Health-promoting bakery products. New raw materials in baking. Development of a product with the addition of amaranth, quinoa and buckwheat. Product execution. |

3.4. Methods of Instruction

Laboratory: performing experiments, designing experiments, working in groups**.**

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 | Project, written assessment | Lab |
| LO-o2 | Project, written assessment | Lab |
| LO-o3 | Project, written assessment | Lab |
| LO-o4 | Project, written assessment | Lab |

4.2 Course assessment criteria

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| A prerequisite for passing a course is the achievement of all the assumed learning outcomes. A positive grade in the course is determined by the number of points obtained in examinations (>50% of the maximum number of points): ): 2,0 (f); 50 % <; 3,0 (e) 51 - 65%; 3,5 (d); 66 - 75%, 4,0 (c); 76 - 85%, 4,5 (b); 86 - 92%; 5,0 (a) 93-100%. |

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) | 20 |
| Non-contact hours - student's own work (preparation for classes or examinations, projects, etc.) | 75 |
| Total number of hours | 125 |
| 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 | 0 |
| Internship regulations and procedures | 0 |

7. Instructional materials

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| Compulsory literature:  Czapski J., Górecka D., Żywność prozdrowotna - składniki i technologia. Wyd. Uniwersytetu Przyrodniczego w Poznaniu 2015. Kunachowicz H., Nadolna I., Wojtasik A., Przygoda B. Żywność wzbogacona, a zdrowie. Wyd. IŻŻ, Warszawa 2004.  Świderski F. Żywność wygodna i żywność funkcjonalna. WNT, Warszawa 2018 |

Approved by the Head of the Department or an authorised person