

### GENERAL INFORMATION ABOUT THE FIELD OF STUDY

*Effective from the academic year 2026/2027*

|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                         |
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| 1.  | Field of study                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Food Technology and Human Nutrition</b>                                                              |
| 2.  | Level of study                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>first -cycle</b>                                                                                     |
| 3.  | Study profile                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>general academic</b>                                                                                 |
| 4.  | Form or forms of study                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>full-time</b>                                                                                        |
| 5.  | Number of semesters                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>7</b>                                                                                                |
| 6.  | Number of ECTS points necessary to complete the studies at a given level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>210</b>                                                                                              |
| 7.  | Professional title                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>engineer</b>                                                                                         |
| 8.  | Assignment of the field of study to a field of science and a scientific or artistic discipline (specification of the percentage share in the case of assignment of the field of study to more than one discipline and indication of the leading discipline within which more than half of the learning outcomes will be achieved)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | field(s) of science: Agriculture Sciences<br>leading discipline – Food Technology and Nutrition – 100 % |
| 9.  | Differences in relation to other programmes with similarly defined goals and learning outcomes, conducted at the University and assigned to the same discipline                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | There is no course at the university with similarly defined outcomes and a similar graduate profile     |
| 10. | <p>Description of the graduate profile including the description of general educational goals as well as employment opportunities and the possibility of continuing studies</p> <p>Graduates possess knowledge of food chemistry and engineering, technological, and economic issues. They specialize in the production, processing, preservation, storage, control, and monitoring of food quality. The knowledge and skills acquired during their studies prepare them for work in facilities involved in food processing, distribution, and storage, as well as human nutrition, and also for pursuing second-cycle studies in this field. Furthermore, they are able to implement and control food production processes, modify existing production processes based on their knowledge, or propose new, environmentally friendly ones. Knowledge of engineering issues enables them to plan and organize production, including the selection of machinery and equipment, economic calculations, and assess the effectiveness of undertaken actions. They know and understand the principles of the agri-food market and the marketing mechanisms related to food trade and human nutrition.</p> <p>The graduate understands the principles of rational human nutrition and the relationship between the quality and quantity of food consumed and the health of society. They are</p> |                                                                                                         |

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|     | <p>knowledgeable about food quality assurance systems and are able to implement them. Additionally, they possess computer skills to control production and the enterprise. The social competencies they possess make them ready to expand their knowledge, adapt to the demands of the modern labor market, establish their own business, or engage in interdisciplinary collaboration. They are prepared to work in engineering and management positions in all sectors of the food industry.</p> <p>The graduate has a foreign language proficiency level of B2 according to the Common European Framework of Reference for Languages.</p> <p>The graduate is prepared to undertake second-cycle studies.</p> |         |
| 11. | Language of instruction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | English |

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Prof. dr hab. Adam Reich  
Rector

## DESCRIPTION OF THE ASSUMED LEARNING OUTCOMES

*Effective from the academic year: 2026/2027*

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                               |                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| <b>Field of study</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                               | <b>Food Technology and Human Nutrition</b>                        |
| <b>Level of study</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                               | <b>first-cycle</b>                                                |
| <b>Study profile</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                               | <b>general academic</b>                                           |
| The description of the assumed learning outcomes for the field of study, level, and profile of education takes into account the universal first-cycle characteristics for levels 6–7 specified in the Act of 22 December 2015 on the Integrated Qualifications System (consolidated text: Journal of Laws of 2024, item 1606) and the second-cycle characteristics for levels 6–7 specified in the Regulation of the Minister of Science and Higher Education of 14 November 2018 (Journal of Laws of 2018, item 2218) on the second-cycle characteristics of learning outcomes for qualifications at levels 6–8 of the Polish Qualifications Framework. |                                                                                                                                               |                                                                   |
| Symbol                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Learning outcomes                                                                                                                             | Reference to the second-cycle PQF characteristics*, **<br>level 6 |
| <b>Knowledge:</b> the graduate knows and understands                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                               |                                                                   |
| K_Wo1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Advanced knowledge of the properties of individual groups of chemical compounds and methods for their determination                           | P6S_WG                                                            |
| K_Wo2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Advanced knowledge of theories explaining the mechanisms of biochemical processes occurring in food and the human body                        | P6S_WG                                                            |
| K_Wo3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Advanced knowledge of selected theories in mathematics, physics, and statistics.                                                              | P6S_WG                                                            |
| K_Wo4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Principles of market operation and marketing of products and services related to food and human nutrition                                     | P6S_WG                                                            |
| K_Wo5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Phenomena and threats to the natural environment resulting from food production and trade                                                     | P6S_WG<br>P6S_WK                                                  |
| K_Wo6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Advanced knowledge of methods for assessing the properties of raw materials, plant and animal products, and factors influencing their quality | P6S_WG                                                            |
| K_Wo7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Advanced understanding of the transformation of food components during production and storage, as well as methods for their control           | P6S_WG                                                            |
| K_Wo8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Advanced understanding of the functioning of the digestive system and the principles of rational human nutrition                              | P6S_WG                                                            |
| K_Wo9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Advanced understanding of the theories, principles, and legal framework for the production of safe food                                       | P6S_WG                                                            |
| K_Wo10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Advanced understanding of unit operations and processes used in food technology                                                               | P6S_WG                                                            |

|                                                     |                                                                                                                                                                                  |                       |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| K_W11                                               | Advanced understanding of production technologies for selected food products, including the selection of machinery and equipment                                                 | P6S_WG                |
| K_W12                                               | Basic processes occurring in the life cycle of food processing machines, devices, facilities, and technological lines                                                            | P6S_WG<br>P6S_WG eng. |
| K_W13                                               | Economic and legal frameworks necessary for organizing and running an individual business in food processing                                                                     | P6S_WK<br>P6S_WK eng. |
| K_W14                                               | Concepts and principles of industrial property protection, copyright, and patent protection                                                                                      | P6S_WK                |
| <b>Skills:</b> the graduate can                     |                                                                                                                                                                                  |                       |
| K_U01                                               | Search for necessary information from literature, databases and other sources; analyze and interpret it                                                                          | P6S_UW                |
| K_U02                                               | Draft official documents and letters using specialized terminology, essential for communicating with the social and business environment                                         | P6S_UK                |
| K_U03                                               | Select and apply appropriate methods and tools using information technology to acquire, process, and present food technology data                                                | P6S_UW                |
| K_U04                                               | Collaborate with others to develop and implement food safety system procedures – HACCP                                                                                           | P6S_UO                |
| K_U05                                               | Plan and organize individual and team work to complete a project and/or research task in food technology and formulate correct conclusions                                       | P6S_UO<br>P6S_UW eng. |
| K_U06                                               | Appropriately select methods and conduct basic food analyses                                                                                                                     | P6S_UW<br>P6S_UW eng. |
| K_U07                                               | Critically analyze and recognize the ethical aspects of the impact of technologies used in food production and processing on the natural environment and human and animal health | P6S_UW<br>P6S_UW eng. |
| K_U08                                               | Correctly identify operations, design, and analyze basic unit processes used in food technology                                                                                  | P6S_UW                |
| K_U09                                               | Solve practical engineering tasks and select appropriate methods for processing, packaging, and storing food products in accordance with applicable regulations                  | P6S_UW<br>P6S_UW eng. |
| K_U10                                               | Conduct a preliminary economic analysis for selected production processes                                                                                                        | P6S_UW<br>P6S_UW eng. |
| K_U11                                               | Formulate, critically analyze, and solve problems related to the maintenance of technological equipment and systems used in food processing                                      | P6S_UW<br>P6S_UW eng. |
| K_U12                                               | Independently plan and implement one's own lifelong learning                                                                                                                     | P6S_UU                |
| K_U13                                               | Prepare a presentation and participate in a debate, discuss issues related to food technology and human nutrition                                                                | P6S_UK                |
| K_U14                                               | Use a specialized foreign language in the field of food technology at the B2 proficiency level of the <i>Common European Framework of Reference for Languages (CEFR)</i>         | P6S_UK                |
| <b>Social competences:</b> the graduate is ready to |                                                                                                                                                                                  |                       |
| K_K01                                               | Critically evaluate one's knowledge and the content received                                                                                                                     | P6S_KK                |

|       |                                                                                                                                                                           |        |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| K_Ko2 | Recognize the importance of knowledge in solving cognitive and practical problems, and seek expert advice when faced with difficulties in independently solving a problem | P6S_KK |
| K_Ko3 | Fulfill social obligations and actively initiate activities for the local community                                                                                       | P6S_KO |
| K_Ko4 | Perform professional roles responsibly, adhere to the principles of professional ethics, and require the same from others                                                 | P6S_KR |
| K_Ko5 | Maintain and care for the achievements and traditions of the food and nutrition technology profession                                                                     | P6S_KR |
| K_Ko6 | Think and act in an entrepreneurial manner                                                                                                                                | P6S_KO |

\* In the case of implementing a study programme leading to the acquisition of engineering competences, in addition to references to the learning outcome characteristics from Part I of the annex, references to the learning outcome characteristics from Part III should be included, ending with the designation (Inż), e.g., P6S\_WG (Inż)

\*\* In the case of a field of study assigned to the field of arts, in addition to references to the learning outcome characteristics from Part I of the annex, references to the learning outcome characteristics from Part II should be included, ending with the designation (Sz), e.g., P6S\_WG (Sz)

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## CHARACTERISTICS AND CONDITIONS FOR THE IMPLEMENTATION OF THE STUDY PROGRAMME

*Effective from the academic year: 2026/2027*

| Field of study |                                                                                                                                                                                                                                                                                                             | Food Technology and Human Nutrition                                        |                   |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------------|
| Level of study |                                                                                                                                                                                                                                                                                                             | first-cycle                                                                |                   |
| Study profile  |                                                                                                                                                                                                                                                                                                             | general academic                                                           |                   |
| 1.             | Total number of teaching hours                                                                                                                                                                                                                                                                              | full-time studies                                                          | part-time studies |
|                |                                                                                                                                                                                                                                                                                                             | 2400+ 160<br>professional practice                                         | -                 |
| 2.             | Number of ECTS points for individual disciplines in the total number of ECTS points required to complete the studies in the field                                                                                                                                                                           | Food Technology and Nutrition - 210                                        |                   |
| 3.             | Total number of ECTS points that a student must obtain as part of classes conducted with the direct participation of academic teachers or other persons conducting classes                                                                                                                                  | full-time studies                                                          | part-time studies |
|                |                                                                                                                                                                                                                                                                                                             | 106                                                                        | -                 |
| 4.             | Number of ECTS points that a student must obtain within classes in the field of humanities or social sciences, not less than 5 ECTS points – in the case of fields of study assigned to disciplines within fields other than humanities or social sciences respectively                                     | 6                                                                          |                   |
| 5.             | Number of ECTS points that a student must obtain within elective classes (not less than 30% of the total number of ECTS points)                                                                                                                                                                             | 74                                                                         |                   |
| 6.             | Number of physical education hours (in the case of first-cycle studies and long-cycle Master's studies conducted in the form of full-time studies)                                                                                                                                                          | 60                                                                         |                   |
| 7.             | Total number of ECTS points assigned to classes shaping practical skills – concerns the practical profile                                                                                                                                                                                                   | not applicable                                                             |                   |
| 8.             | Total number of ECTS points assigned to classes related to scientific activity in the discipline or disciplines to which the field of study is assigned, including the preparation of students for conducting scientific activity or participation in this activity – concerns the general academic profile | specialization Food technology: 119<br>specialization Human Nutrition: 119 |                   |

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|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------|-----------------|-----------------------|
| 9.                                                       | <p>Extent, rules, and forms of professional internships and the number of ECTS points assigned to internships</p> <p>Number of hours: 160</p> <p>Duration: 4 weeks</p> <p>ECTS credits: 6</p> <p>Method of implementation and conditions for participation in the internship:</p> <p>The internship takes place during the summer holidays, after classes have ended in the 4th semester.</p> <p>Students can choose the location of their internship based on their interests and abilities, provided that the internship is completed in workplaces relevant to the Food Technology and Human Nutrition program, i.e., food production plants, catering facilities, and entities supervising the commercial quality of agricultural and food products and the health conditions of food and nutrition.</p> <p>Students can complete their internship both in Poland and abroad, provided that it is aligned with their field of study and enables them to achieve the goals and learning outcomes of the internship. The condition for accepting an internship abroad is submitting a commitment letter (commitment to accept the internship) with information about the profile of the employer accepting the internship. The internship may be completed at research centers or other College units conducting research in the scientific discipline of food technology and human nutrition. Students complete their internship at a time consistent with their study schedule and internship plan (prepared by the internship coordinator for the program).</p> |                                                           |                 |                 |                       |
| 10.                                                      | <p>Description of methods for verification and assessment of learning outcomes achieved by the student throughout the entire education cycle</p> <p>Appropriate and appropriately differentiated methods for assessing learning outcomes have been selected for all the learning outcomes defined in the study program. Details regarding the methods for assessing learning outcomes are provided in the course syllabi. The most commonly used methods include written examinations, presentations, tests, laboratory reports, observation and assessment of class activities, and projects. Passing a given course confirms the student's achievement of the intended learning outcomes. Assessment of outcomes is conducted on an ongoing basis during classes (tests, tests, oral presentations) and during the final course assessment.</p> <p>Learning outcomes defined for the professional internship are assessed based on the student's presentation of the scope of duties performed, the submission of a student's internship journal and report, and an assessment of the professional internship provided by the company's internship supervisor.</p> <p>Key learning outcomes for the program are also assessed through the completion of the engineering thesis, seminar, and diploma examination.</p>                                                                                                                                                                                                                                              |                                                           |                 |                 |                       |
| 11.                                                      | <p>Conditions for graduation</p> <p>The condition for completing the studies is to obtain the learning outcomes specified in the study program and the required number of ECTS points (210), complete the professional internships provided for in the program, submit an engineering diploma thesis and pass the diploma exam.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |                 |                 |                       |
| Conditions for the implementation of the study programme |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                           |                 |                 |                       |
| No.                                                      | Subjects or groups of subjects *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Learning outcomes assigned to subjects/groups of subjects | Number of hours | Assessment form | Number of ECTS points |

|                            |                                                                                                                               |                                      | full-time<br>studies | part-<br>time<br>studies |    |             |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------------------|--------------------------|----|-------------|
| <b>General subjects</b>    |                                                                                                                               |                                      |                      |                          |    |             |
| 1.                         | Ethics                                                                                                                        | K_Wo5, K_Uo7, K_Ko4                  | 15                   |                          | ZO | 1           |
| 2.                         | Plant Raw Material Production                                                                                                 | K_Wo6, K_Uo7, K_Ko2                  | 30                   |                          | ZO | 3           |
| 3.                         | Introduction to Food Science                                                                                                  | K_Wo7, K_U12, K_Uo2                  | 15                   |                          | Z  | 2           |
| 4.                         | Information Technology                                                                                                        | K_Uo1, K_Uo3, K_Ko1                  | 25                   |                          | ZO | 3           |
| 5.                         | University-wide Subject                                                                                                       |                                      | 30                   |                          | Z  | 2           |
| 6.                         | Animal Raw Material Production                                                                                                | K_Wo6, K_U12, K_Ko2                  | 30                   |                          | ZO | 3           |
| 7.                         | Physical Education                                                                                                            |                                      | 60                   |                          | ZO | -           |
| 8.                         | Foreign Language                                                                                                              | K_U13, K_U14                         | 120                  |                          | E  | 8           |
|                            |                                                                                                                               |                                      | <b>Σ 325</b>         | <b>Σ</b>                 |    | <b>Σ 22</b> |
| <b>Basic subject group</b> |                                                                                                                               |                                      |                      |                          |    |             |
| 9.                         | Chemistry                                                                                                                     | K_Wo1, K_Uo6, K_Ko1                  | 60                   |                          | E  | 6           |
| 10.                        | Metrology in Food Sciences                                                                                                    | K_Wo3, K_Uo6, K_Ko1                  | 35                   |                          | ZO | 4           |
| 11.                        | Mathematics                                                                                                                   | K_Wo3, K_Uo1, K_Ko1                  | 30                   |                          | ZO | 3           |
| 12.                        | Statistic in Food and Nutrition Studies                                                                                       | K_Wo3, K_Uo3, K_Ko5                  | 45                   |                          | ZO | 2           |
|                            |                                                                                                                               |                                      | <b>Σ 170</b>         | <b>Σ</b>                 |    | <b>Σ 15</b> |
| <b>Major subject group</b> |                                                                                                                               |                                      |                      |                          |    |             |
| 13.                        | Aspects of Food Law                                                                                                           | K_Wo9, K_Uo1, K_Ko4,                 | 15                   |                          | ZO | 1           |
| 14.                        | Elective Course 1:<br>Economics and Organization of Food Enterprises/<br>Entrepreneurship and Management in the Food Industry | K_Wo4, K_W13,<br>K_Uo2, K_U10, K_Ko6 | 30                   |                          | ZO | 2           |
| 15.                        | Food Chemistry                                                                                                                | K_Wo1, K_Wo2, K_Uo8,<br>K_Ko2        | 75                   |                          | E  | 7           |
| 16.                        | Food Biochemistry                                                                                                             | K_Wo1, K_Wo2, K_Uo6,<br>K_Ko2        | 60                   |                          | E  | 5           |
| 17.                        | Food Process Engineering                                                                                                      | K_W10, K_Uo8, K_Ko2                  | 60                   |                          | E  | 5           |
| 18.                        | Food Microbiology                                                                                                             | K_Wo7, K_Uo5, K_Uo9,<br>K_Ko4        | 75                   |                          | E  | 7           |
| 19.                        | Human Nutrition                                                                                                               | K_Wo4, K_Wo8,<br>K_Uo5, K_Ko3, K_Ko5 | 90                   |                          | E  | 8           |
| 20.                        | Food Analysis                                                                                                                 | K_Wo6, K_Uo5, K_Uo6,<br>K_Ko4        | 90                   |                          | E  | 7           |

|     |                                                         |                                   |               |          |    |             |
|-----|---------------------------------------------------------|-----------------------------------|---------------|----------|----|-------------|
| 21. | Machinery and Equipment of Food Industry                | K_W11, K_W12, K_U11, K_Ko2        | 70            |          | E  | 6           |
| 22. | General Food Technology and Preservation                | K_Wo7, K_W10, K_Uo7, K_Ko4        | 75            |          | E  | 6           |
| 23. | Food Packaging                                          | K_Wo6, K_Uo7, K_Ko6               | 30            |          | ZO | 2           |
| 24. | Evaluation of Food Bioactivity in Model Systems         | K_Wo2, K_Uo7, K_Ko4               | 35            |          | ZO | 2           |
| 25. | Food Sensory Analysis                                   | K_Wo6, K_Uo6, K_Ko1               | 25            |          | ZO | 1           |
| 26. | Food Safety and Hygiene                                 | K_Wo9, K_Uo4, K_U11, K_Ko4        | 60            |          | ZO | 4           |
| 27. | Bioprocesses in Food Technology                         | K_Wo2, K_Wo7, K_Uo5, K_Ko4        | 45            |          | ZO | 3           |
| 28. | Food Refrigeration and Storage                          | K_Wo7, K_Uo9, K_Ko4               | 35            |          | ZO | 2           |
| 29. | Quality Assessment of Animal Raw Materials and Products | K_Wo6, K_Uo5, K_Uo6, K_Ko2        | 65            |          | ZO | 4           |
| 30. | Quality Assessment of Plant Raw Materials and Products  | K_Wo6, K_Uo5, K_Uo6, K_Ko2        | 65            |          | E  | 5           |
| 31. | Food Toxicology                                         | K_Wo9, K_Uo7, K_Ko4               | 40            |          | ZO | 3           |
| 32. | Elective Course 2                                       | K_Wo7                             | 15            |          | ZO | 1           |
| 33. | Food Quality Management Systems                         | K_Wo5, K_Wo9, K_Uo4, K_Ko4        | 45            |          | ZO | 3           |
| 34. | Technological Design of Food Industry Plants            | K_W11, K_W12, K_Uo5, K_Uo8, K_Ko6 | 60            |          | E  | 4           |
| 35. | Standardization in Food Production                      | K_W13, K_Uo3, K_U13, K_Ko6        | 35            |          | ZO | 3           |
| 36. | Development of New Food Products                        | K_W11, K_Uo9, K_Ko5               | 60            |          | E  | 6           |
|     |                                                         |                                   | <b>Σ 1255</b> | <b>Σ</b> |    | <b>Σ 97</b> |

Elective major subject group/ specialty/ educational path: **Food Technology**

|     |                                 |                            |    |  |    |   |
|-----|---------------------------------|----------------------------|----|--|----|---|
| 37. | Gastronomic Technology          | K_Wo7, K_Wo8, K_Uo9, K_Ko5 | 45 |  | ZO | 2 |
| 38. | Fermentation Industry Processes | K_W11, K_Uo7, K_Uo9, K_Ko5 | 70 |  | E  | 7 |
| 39. | Dairy Technology                | K_W11, K_Uo7, K_Uo9, K_Ko5 | 75 |  | E  | 8 |
| 40. | Fruit and Vegetable Technology  | K_W11, K_Uo7, K_Uo9, K_Ko5 | 75 |  | E  | 8 |
| 41. | Fats and Oils Technology        | K_W11, K_Uo7, K_Uo9, K_Ko5 | 25 |  | ZO | 2 |
| 42. | Poultry and Egg Technologies    | K_W11, K_Uo7, K_Uo9, K_Ko5 | 75 |  | E  | 6 |

|                                                                                   |                                                                |                                                 |               |          |    |              |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------|---------------|----------|----|--------------|
| 43.                                                                               | Meat Technology                                                | K_W11, K_U07, K_U09, K_K05                      | 75            |          | E  | 6            |
| 44.                                                                               | Cereal and Bakery Technology                                   | K_W11, K_U07, K_U09, K_K05                      | 75            |          | E  | 6            |
| 45.                                                                               | Carbohydrate Processing Technology                             | K_W11, K_U07, K_U09, K_K05                      | 75            |          | E  | 6            |
| 46.                                                                               | Engineering Seminar                                            | K_W14, K_U02, K_U12, K_U13, K_U14, K_K01        | 60            |          | ZO | 19           |
|                                                                                   |                                                                |                                                 | <b>Σ 650</b>  | <b>Σ</b> |    | <b>Σ 70</b>  |
| <b>Total (the sum includes subjects for one specialty/ one educational path)</b>  |                                                                |                                                 | <b>Σ 2400</b> | <b>Σ</b> |    | <b>Σ 204</b> |
| Professional internship                                                           |                                                                | K_W09, K_U01, K_U04, K_U05, K_U06, K_U07, K_K06 | 160           |          | ZO | 6            |
| <b>Total:</b>                                                                     |                                                                |                                                 | <b>2560</b>   |          |    | <b>210</b>   |
| <b>Elective major subject group/ specialty/ educational path: Human Nutrition</b> |                                                                |                                                 |               |          |    |              |
| 37.                                                                               | Nutritional Value Assessment of Food Products                  | K_W06, K_W07, K_U05, K_U06, K_K05               | 35            |          | ZO | 2            |
| 38.                                                                               | Practical Aspects of Human Nutrition                           | K_W08, K_U05, K_U07, K_K05                      | 90            |          | E  | 7            |
| 39.                                                                               | Culinary Processes in Gastronomy                               | K_W07, K_W08, K_U09, K_K05                      | 60            |          | E  | 5            |
| 40.                                                                               | Meat Processing                                                | K_W11, K_U09, K_K05                             | 55            |          | E  | 5            |
| 41.                                                                               | Carbohydrate and Cereal Processing                             | K_W11, K_U09, K_K05                             | 45            |          | E  | 4            |
| 42.                                                                               | Poultry and Egg Technologies                                   | K_W11, K_U09, K_K05                             | 45            |          | E  | 4            |
| 43.                                                                               | Health-Promoting Foods                                         | K_W07, K_U08, K_K05                             | 45            |          | ZO | 3            |
| 44.                                                                               | Alternative Nutrition                                          | K_W08, K_U05, K_K03                             | 30            |          | ZO | 2            |
| 45.                                                                               | Nutritional Assessment                                         | K_W08, K_U06, K_K03                             | 35            |          | ZO | 4            |
| 46.                                                                               | Dairy Processing                                               | K_W11, K_U09, K_K05                             | 55            |          | E  | 6            |
| 47.                                                                               | Processing of Fruits, Vegetables, Mushrooms, and Oilseed Crops | K_W11, K_U09, K_K05                             | 65            |          | E  | 7            |
| 48.                                                                               | Rationalization of Nutrition                                   | K_W08, K_U07, K_U10, K_K03                      | 30            |          | ZO | 2            |
| 49.                                                                               | Engineering Seminar                                            | K_W14, K_U02, K_U12, K_U13, K_U14, K_K01        | 60            |          | ZO | 19           |
|                                                                                   |                                                                |                                                 | <b>Σ 650</b>  | <b>Σ</b> |    | <b>Σ 70</b>  |
| <b>Total (the sum includes subjects for one specialty/ one educational path)</b>  |                                                                |                                                 | <b>Σ 2400</b> | <b>Σ</b> |    | <b>Σ 204</b> |

|                         |                                                       |             |  |    |            |
|-------------------------|-------------------------------------------------------|-------------|--|----|------------|
| Professional internship | K_Wo9, K_Uo1, K_Uo4,<br>K_Uo5, K_Uo6, K_Uo7,<br>K_Ko6 | 160         |  | ZO | 6          |
| <b>Total:</b>           |                                                       | <b>2560</b> |  |    | <b>210</b> |

Description of the course of study including the sequence of subjects, rules for choosing elective subjects, and rules for implementing educational paths:

- 1) During the first year of studies, students are required to complete an Occupational Safety and Health (OSH) course and library training in the form of an e-learning course.
- 2) Students jointly complete a group of general, basic, and major subjects.
- 3) General and basic subjects are compulsory and are completed during the first four semesters of study, excluding the university-wide subject.
- 4) A university-wide subject in the humanities or social sciences is completed in the 7th semester. The course catalog is published annually.
- 5) A foreign language is completed over four semesters (semesters 1-4).
- 6) The major subjects include twenty-two compulsory subjects taken by all students and one pair of major subjects, from which students choose one of the two proposed subjects. The major subjects are completed in semesters 1-7.
- 7) Additionally, the program includes an Elective course 2, completed in the 4th semester. Students choose only one of the five proposed subjects.
- 8) The internship is completed during the summer holidays, after classes in the fourth semester have concluded.
- 9) Education within the specialization begins in the fifth semester. Students choose one of two specializations: Food Technology and Human Nutrition. Students are required to complete all specialization courses included in the program for a given specialization.
- 10) In the sixth semester, students select a supervisor and a thesis topic.
- 11) The engineering seminar is held during the last two semesters of study (semesters 6-7). The seminar covers intellectual property protection. Passing the seminar in the final semester requires submitting a completed thesis verified by an anti-plagiarism system.
- 12) Diploma theses in first-cycle (engineering) studies may be experimental or project-based.
- 13) During the diploma examination, the student answers questions relating to the topic of the diploma thesis and randomly selected questions related to the field of study and specialization.

President of the Senate  
of the University of Rzeszów

Prof. dr hab. Adam Reich  
Rector