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| FACULTY: | Faculty of Mechanical Engineering and Energetics |
| FIELD OF STUDY: | Food Technology and Human Nutrition |
| ERASMUS COORDINATOR OF THE FACULTY: | Agnieszka Szparaga, PhD, DSc, Eng |
| E-MAIL ADDRESS OF THE COORDINATOR: | Agnieszka.szparaga@tu.koszalin.pl |
| COURSE TITLE: | **General Food Technology** |
| LECTURER’S NAME: | Joanna Piepiórka-Stepuk, PhD, DSc, Eng |
| E-MAIL ADDRESS OF THE LECTURER: | joanna.piepiorka@tu.koszalin.pl |
| ECTS POINTS FOR THE COURSE: | 3 |
| COURSE CODE (USOS): | 0811>2000-OTŻ |
| ACADEMIC YEAR: | 2024/2025 |
| SEMESTER: (W – winter, S – summer) | S |
| HOURS IN SEMESTER: | Lecture (15h) + Laboratory (30h) |
| LEVEL OF THE COURSE:  (1st cycle, 2nd cycle, 3rd cycle) | 1st cycle |
| TEACHING METHOD:  (lecture, laboratory, group tutorials, seminar, other-what type?) | Group tutorials |
| LANGUAGE OF INSTRUCTION: | * **English full time scheme for classes with 5 and more International Erasmus+ students enrolled/accepted;** * **English 50% individually with the teacher + Polish 50% with Polish students or individual project work- scheme for classes with less than 5 International Erasmus+ students enrolled/ accepted;** |
| ASSESSMENT METOD:  (written exam, oral exam, class test, written reports, project work, presentation, continuous assessment, other – what type?) | (GT) Written reports, written works from the issues discussed  (Lab) Written reports and laboratory work |
| COURSE CONTENT: | **Lecture**  1. General food technology as a scientific discipline and its connection with other fields of knowledge and application in production processes (1h)  2. Food technology as a set of operations and unit processes carried out using tools, machines and industrial equipment. Food quality criteria and the impact of technological processes on quality. (2h)  3. Characteristics of food industry raw materials, sensory, rheological and thermal properties (2h)  4. Classification of operations in food technology into thermal, mechanical, chemical, diffusion and auxiliary operations and processes (1h)  5. Mechanical operations in food technology. Grinding, separating, mixing, forming, dosing (8h)  6. Food packaging, storage and transport (1h)  **Laboratory**  1. Methods of heating raw materials in food technology  2. Cooling and freezing of raw materials in food technology  3. Creation of emulsions - Use of the emulsifying properties of egg yolks  4. Coagulation and gelification - Use of the thickening properties of polysaccharide hydrocolloids  5. Influence of the grinding method on the efficiency of fruit and vegetable products  6. Separation techniques used in food processing  7. Types of mixers and their influence on the time and degree of mixing  8. Fermentation processes on the example of baking technology: Sourdough production technology and determination of yeast propelling force  9. Processes based on the use of enzymes on the example of apple juice production technology  10. Thermal inactivation of milk enzymes  11. Biological methods of food preservation - lactic fermentation  12. Chemical methods of food preservation  13. Thermal methods of food preservation – pasteurization  14. Food preservation by drying |
| ADDITIONAL INFORMATION: | - |

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