| •                                       |  |            |             |                |             |               |              |   |
|---|--|------------|-------------|----------------|-------------|---------------|--------------|---|
| Course code                             |  |            |             |                |             |               |              |   |
| Type and description                    | Background Course  |            |             |                |             |               |              |   |
| ECTS credit                             | 2  |            |             |                |             |               |              |   |
| Course name                             | Advances in Fermented Food and Beverages   |            |             |                |             |               |              |   |
| Course name in Polish                   | Postępy w technologii żywności i napojów fermentowanych  |            |             |                |             |               |              |   |
| Language of instruction                 | English  |            |             |                |             |               |              |   |
| Course level                            | 8 PRK  |            |             |                |             |               |              |   |
| Course coordinator                      | Dr hab. inż. Edyta Kordialik-Bogacka, prof. uczelni (0000-0002-4166-6074)  |            |             |                |             |               |              |   |
| Course instructors                      | Dr nab. inz. Edyta Kordialik-Bogacka, prot. uczelni (0000-0002-4166-60/4), Dr hab. inż. Anna Diowksz, prof. uczelni (0000-0001-8673-8847); Prof. dr. hab. inż. Katarzyna Śliżewska (0000-0002-3161-1707); dr hab. inż. Andrea Patelski (0000-0002-8815-9803)   |            |             |                |             |               |              |   |
| Delivery methods and<br>course duration | L  | Lecture    | Tutorials   | Laboratory     | Project     | Seminar       | Other        | Total of<br>teaching<br>hours<br>during<br>semester |
|   | Contact hours  | 5          |             | 10             |             |               | 0            | 15  |
|   | E-learning   | No         | No          | No             | No          | No            | No           |   |
|   | Assessment<br>criteria<br>(weightage)  | 1,00       |             | 1,00           |             |               | 0,00         |   |
| Course objective                        | The aim of the course is to familiarize PhD students with modern applications in fermentation technology, including baking, dairy and alcoholic beverages technologies   |            |             |                |             |               |              |   |
| Learning outcomes                       | <ul> <li>After completing the course student is able to:</li> <li>List and describe innovative fermented products – outcomes W1, K1</li> <li>List novel raw materials and additives and explain their technological role – outcomes W1, K1</li> <li>Describe potential modifications in technologies of fermented products – outcomes W1, K1</li> <li>Select and apply the appropriate analytical techniques - outcomes U3, K1</li> <li>Interpret and evaluate the results of analysis critically - outcomes W4, K1, K2</li> <li>Organize work in a group, cooperate with members of the group, show responsibility for the entrusted range of studies, guality of own work - outcomes U3</li> </ul> |            |             |                |             |               |              |   |
| Assessment methods                      | Learning outcomes 1-3: written test.<br>Learning outcomes 4-6: laboratory reports, assessment of work, attitude and engagement in the classes.<br>Final assessment includes:<br>1. written test (80%)<br>2. laboratory reports and student activity (20%)  |            |             |                |             |               |              |   |
| Prerequisites                           | Knowledge of biochemistry, microbiology and biotechnology  |            |             |                |             |               |              |   |
| Course content with                     | LECTURE  |            |             |                |             |               |              |   |
| delivery methods                        | Presentation of innovations in fermented food and beverages production (bread, meat and milk<br>products, beer, wine and spirits), including use of starters, probiotics, immobilized microorganisms,<br>alternative raw materials, enzymes, biologically active substances and other additives.<br>LABORATORY<br>The programme covers microbiological problems, fermentation technologies, including starters,<br>fermentation with immobilized cells.  |            |             |                |             |               |              |   |
| Basic reference materials               | Sandeep Kumar Pa   | inda; Prat | thapkumar H | alady Shetty ( | Eds). Innov | ations in Tec | hnologies fo | or Fermented  |
| Other reference meterials               | roou and beverage industries, Springer, 1st edition, 2018  |            |             |                |             |               |              |   |
| Average student workload                | -<br>35 h  |            |             |                |             |               |              |   |
| outside classroom                       |  |            |             |                |             |               |              |   |
| Comments                                | -  |            |             |                |             |               |              |   |
| Last update                             | 18.03.2025   |            |             |                |             |               |              |   |