|  |  |
| --- | --- |
| **Course code** |  |
| **Type and description** | EC – Elective Course |
| **ECTS credit** | 1 |
| **Course name** | Biological Evaluation of Materials |
| **Course name in Polish** | Biologiczna ocena materiałów |
| **Language of instruction** | English |
| **Course level** | 8 PRK |
| **Course coordinator** | Prof. dr hab. Bogdan Walkowiak |
| **Course instructors** | Dr inż. Marta Kamińska, dr inż. Aleksandra Jastrzębska, dr inż. Witold Szymański,  dr Witold Jakubowski |
| **Delivery methods and course duration** | |  | **Lecture** | **Tutorials** | **Laboratory** | **Project** | **Seminar** | **Other** | **Total of teaching hours during semester** | | --- | --- | --- | --- | --- | --- | --- | --- | | Contact hours | 0 | 0 | 0 | 15 | 0 | 0 | 15 | | E-learning | no | no | no | no | no | no | no | | Assessment criteria (weightage) | 0 | 0 | 0 | 100% | 0 | 0 | 100% | |
| **Course objective** | The aim of the course is to enable the acquisition of knowledge in the field of biological methods of recognition and evaluation of materials |
| **Learning outcomes** | PhD student after completing the course:  1. can characterize biological methods useful in the recognition and evaluation of materials;  2. can indicate biological methods useful for the identification and grouping of nanomaterials and the assessment of their hazards  W4, U4, K1 |
| **Assessment methods** | Methods of verification of learning outcomes  effect - presentation of the project  The final grade consists of:  Presentation - 100% |
| **Prerequisites** |  |
| **Course content with delivery methods** | Learning content - project  1. Introduction to the world of physical and biological phenomena  2. The interrelationship of materials science and life sciences  3. Materiamics  4. Biological recognition of materials  5. Quantum basis of material recognition by cells  6. Considerations on substrate binding and catalysis models |
| **Basic reference materials** | Walkowiak B, Walkowiak-Przybyło M, Komorowski P. Biological Evaluation of Materials, The interaction of materials with their environment. ©IOP Publishing Ltd 2022, ISBN 978-0-7503-2656-8 (ebook), DOI 10.1088/978-0-7503-2656-8 |
| **Other reference materials** | INTERNET |
| **Average student workload outside classroom** | 15 |
| **Comments** |  |
| **Last update** | May 2023 |