Załącznik nr 6 do Uchwały nr 482

 Rady Wydziału Nauk o Środowisku

UWM w Olsztynie

z dnia 17.05.2019 r.

**Wydział Nauk o Środowisku**

**Egzamin dyplomowy**

**Studia stacjonarne I stopnia - kierunek: Inżynieria środowiska**

**specjalność: Biotechnology**

od cyklu kształcenia 2019/2020

|  |  |
| --- | --- |
| **Zagadnienia dyplomowe** | **Efekty kierunkowe** |
| 1. Hurdle technology in food preservation: concept, hurdle effect and future prospects.
2. Antimicrobials derived from plant sources which can be used as food preservatives.
3. Protective cultures, function and application areas.
4. Bacteriocins of lactic acid bacteria: characteristics, classification and food applications.
5. Enzyme technology and bioinformatics
6. Possibilities of new product design via bioinformatic applications
7. Enzymes preparations in food industry
8. Examples of biotechnology application in food production
9. Application of microorganisms in food production
10. Enzymatic modification of food compounds
11. Microbial proteins and oils as food components
12. Phages application in biotechnology
13. Nanotechnology in food production
14. Membrane techniques in food technology
15. Design Thinking - aim, definition, samples of DT projects
16. Biorefinery concept and classification.
17. Pretreatment, conversion and separation processes in biorefinery.
18. Biochars – production, properties and examples of application.
19. Two-stage anaerobic digestion; characteristic, process conditions.
20. Application of Polymerase Chain Reaction (PCR) in Biotechnology
21. Electrophoretic techniques used for nucleic acids and proteins separation
22. Process of genetic modification
23. Unit processes in activated sludge with integrated removal of carbon, nitrogen and phosphorus.
24. Technology of membrane bioreactors in wastewater treatment
25. Biosurfactants and their application in soil remediation.
26. Processing of sludge in wastewater treatment plants
27. Explain the dose-response relationship.
28. What is the purpose of specifying an "endpoint" in a study of chemical toxicity. Give several examples.
29. Sewage sludge composting – definition, process characteristics, bioproducts obtained
30. Mechanical-biological treatment in municipal solid waste management
 | K\_W02K\_W03K\_W04K\_W05K\_W06K\_W07K\_W08K\_W09K\_W10K\_W11K\_W12K\_W14K\_W16K\_U03K\_U04K\_U06K\_U07K\_U08K\_U10K\_U11K\_U14K\_U15K\_K01K\_K03 |