Załącznik nr 1 do Uchwały nr 5/4/RN-WB/2025
Rady Naukowej Wydziału Budownictwa i Nauk o Środowisku
Politechniki Białostockiej z dnia 14 maja 2025

Topics and scope of doctoral dissertations
in the academic year 2025/2026

Lp.	Name and surname	Topic	Scope of doctoral dissertations	telephone number	e-mail
1.	Assoc. Prof. Dorota Anna Krawczyk, DSc, PhD, Eng.	Integrated approach to designing buildings in urban areas with the application of renewable energy sources and energy-saving technologies in the context of urban forms	1. Defining the purpose and the scope of research. 2. Review of literature on the subject of the work. 3. Research and analysis of the structure of the urban environment in the selected area. 4. Analysis of the possibilities to apply solutions that enable decarbonization of construction in the analyzed area. 5. Proposal of a universal methodology for an integrated design approach. 6. Summary, conclusions and plans for further research.	-	d.krawczyk@pb.edu.pl
2.	Marzena Matejczyk, DSc, PhD	Application of biosensor technologies in toxicity assessment of selected micropollutants in wastewater and surface water	1. Environmental pollution by pesticides and the effects of their impact on the human body. 2. Characteristics of selected pesticides and the current state of knowledge about their toxicity. 3. Processes for removing pesticides from wastewater. 4. Application of biosensors in the assessment of toxicity of micropollutants in water and wastewater.	606 614 009	m.matejczyk@pb.edu.pl
3.	Assoc. Prof Grzegorz Świderski, DSc, PhD, Eng.(supervisor) Assoc. Prof Monika Kalinowska DSc, PhD, Eng.(auxiliary supervisor)	Processing of residues from the agri-food industry for the isolation of bioactive substances and the production of biodegradable packaging materials.	1. Literature review. 2. Extraction of bioactive substances from selected residues from the agri-food industry and study of physicochemical and biological properties of extracts. 3. Management of post-extraction waste for the production of biodegradable packaging materials. 4. Analysis of the obtained results and conclusions.	535998633 664972217	g.swiderski@pb.edu.pl m.kalinowska@pb.edu.pl
4.	Assoc. Prof. Izabela Anna Tałałaj, DSc, PhD, Eng.	The influence of selected social, economic and environmental factors on the amount of municipal waste generated	1. Review of literature on the characteristics of municipal waste. 2. Characteristics of social, economic and environmental factors that may influence the amount of waste generated. 3. Description of the research methodology. 4. Characteristics of statistical methods and tools used to forecast the amount of waste. 5. Analysis of the impact of selected factors on the amount of municipal waste generated. 6. Preparation of the obtained results and statistical analyses. 7. Conclusions.		i.talalaj@pb.edu.pl

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5.	Assoc. Prof. Tomasz Janusz Teleszewski, DSc, PhD, Eng. Prof. Mirosław Żukowski, DSc, PhD, Eng. (auxiliary supervisor)	Analysis of temperature distribution under a single-family building.	1. Review of literature related to the research topic. 2. Conducting tests of temperature distribution under an existing single-family building located in Poland. Analysis of ground temperature under the building depending on the building heating technique. 3. Development of models of temperature distribution and heat flux density under a single-family building, which can be used to design ground heat exchangers under the building. 4. Validation of the developed models based on an experiment.	797 995 927	t.teleszewski@pb.edu.pl m.zukowski@pb.edu.pl
6.	Assoc. Prof. Elżbieta Wołejko, DSc, PhD, Eng.	The role of anthropogenic pollution in shaping the human microbiome	1. A review of the literature on the influence of anthropogenic environmental pollution on changes in the human microbiome. 2. Determine the methodology and conduct the research 3. Laboratory experiment conducted 4. Analysis of the research results obtained and performance of statistical analysis. 5. Conclusion	698 676 631	e.wolejko@pb.edu.pl