

DOCTORAL SCHOOL AT THE MEDICAL UNIVERSITY OF BIALYSTOK
in the discipline of pharmaceutical sciences, medical sciences, and health sciences

DOCTORAL SCHOOL PLAN – 2023/2024 academic year – in accordance with the 2023-2027
educational cycle

No.	Module/class name	Classes time			ECTS	Form of crediting a course	
		Year I					
		Total	including				
Lectures	Seminars		Practical classes				
1.	Health&Safety rules in scientific and didactic work	4	2	-	2	-	Pass
	<i>University Health&Safety Inspector (Department of Hygiene, Epidemiology and Ergonomics)</i>		2	-	-		
	<i>MUB Unit where the doctoral student conducts scientific research</i>		-	-	1		
	<i>MUB Unit where the doctoral student conducts didactic classes</i>		-	-	1		
2.	Biostatistics in scientific research – primary statistical methods <i>Department of Biostatistics and Medical Informatics</i>	20	6	-	14	2	Exam
3.	Specialised English – developing academic language skills <i>Department of Foreign Languages</i>	30	-	-	30	2	Pass
4.	Bioethics and law in biomedical research	10	-	10	-	1	Pass
	<i>Department of Human Philosophy and Psychology</i>		-	2	-		
	<i>Department of Medicinal Chemistry</i>		-	4	-		
	<i>Department of Experimental Physiology and Pathophysiology</i>		-	4	-		
5.	Basics of entrepreneurship	12	-	12	-	1	Pass
	<i>Department of Medicinal Chemistry</i>		-	3	-		
	<i>MUB units indicated by the Director of the Doctoral School</i>		-	9	-		
6.	Methods for obtaining grants <i>MUB unit indicated by the Director of the Doctoral School</i>	4	-	4	-	1	Pass
7.	Progress in the methodology of scientific research I (2 subject to be selected – 10 h)	10	-	-	10	2*	Pass
	Research methods in the assessment of biological activity of new compounds (<i>in vitro</i> studies) <i>Department of Medicinal Chemistry</i>	5	-	-	5		
	Molecular imaging methods in diagnostics and therapy <i>Department of Medicinal Chemistry</i>	5	-	-	5		
	Preventive medicine <i>Department of Population Medicine and Lifestyle Diseases Prevention</i>	5	-	-	5		
	Population studies – methodology, interpretation <i>Department of Population Medicine and Lifestyle Diseases Prevention</i>	5	-	-	5		
	Application of qualitative methods in health sciences <i>Department of Obstetrics, Gynaecology and Maternity Care</i>	5	-	-	5		
	Methods of gathering and analysis of data in epidemiology studies for the needs of restorative medicine <i>Department of Hygiene, Epidemiology and Ergonomics</i>	5	-	-	5		
	Methods of gathering and analysis of data in epidemiology studies for the needs of health promotion and disease prophylaxis <i>Department of Hygiene, Epidemiology and Ergonomics</i>	5	-	-	5		
8.	Facultative classes I (2 subjects to be selected – 20 h) – Principles for developing and preparing the presentation of results of scientific research (10h)	20	-	20	-	2**	Pass

	<i>Department of Toxicology</i> – From manuscript to a published work (10 h) <i>Department of Toxicology</i> – The principles and methods of assessing the safety of chemical substances, medicines, and medical products (10 h) <i>Department of Toxicology</i> – Thinking with a business model – Canvas Business model (10 h) <i>MUB unit indicated by the Director of the Doctoral School</i>						
9.	Methods of statistical planning and analysis of scientific research <i>Department of Biostatistics and Medical Informatics</i>	20	10	-	10	2	Exam
10.	Doctoral seminar I Presentation of an individual research plan <i>Director of the Doctoral School</i>	11	-	11	-	1	Pass
11.	Conducting didactic classes <i>A designated MUB unit</i>	60	-	-	60	2	Pass
12.	Doctoral workshop I (Performance of the doctoral student's individual research plan) <i>A designated MUB unit</i>	600	-	-	600	-	Pass
	Total	141 + 60 + 600	18	57	66 + 60 + 600	16	2 exa ms

* 2 ECTS points will be awarded after finishing 10 h of selected classes as part of the module “**Progress in the methodology of scientific research I**”

** 2 ECTS points will be awarded after finishing 20 h of classes under the module “Facultative classes I”

Plan confirmed on 09.12.2022 by the Programme Board of the MUB Doctoral School in accordance with the Resolution no. 21/2020 of the Senate of the Medical University of Białystok dated 16.01.2020

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No.	Module/class name	Classes time				ECTS	Form of crediting a course
		Year II					
		Total	including				
Lectures	Seminars		Practical classes				
1.	Specialised English – developing academic language skills <i>Department of Foreign Languages</i>	30	-	-	30	2	Exam
2.	Biostatistics in scientific research – advanced statistical methods <i>Department of Biostatistics and Medical Informatics</i>	20	8	-	12	2	Exam
3.	Progress in the methodology of scientific research II (1 - 2 subjects to be selected – 10 h)	10	-	-	10	2*	
	Modern analytical techniques in biomedical and pharmaceutical studies <i>Department of Inorganic and Analytical Chemistry</i>	10	-	-	10		Pass
	Advanced analytical techniques in -omics studies <i>Department of Inorganic and Analytical Chemistry</i>	10	-	-	10		Pass
	Histomorphological techniques in assessment of cell functionality in physiology and pathological conditions <i>Department of Histology and Cytophysiology</i>	5	-	-	5		Pass
	Contemporary methods of drug design and synthesis <i>Department of Synthesis and Technology of Drugs</i>	5	-	-	5		Pass
	Proteomic techniques in nervous system diseases diagnosis <i>Department of Neurodegeneration Diagnostics</i>	5	-	-	5		Pass
	Personalised medicine <i>Department of Population Medicine and Lifestyle Diseases Prevention</i>	5	-	-	5		
	Planning and interpretation of descriptive epidemiology – cross-sectional studies, correlational studies and studies of irregularities <i>Department of Hygiene, Epidemiology and Ergonomics</i>	5	-	-	5		Pass
	Planning and interpretation of analytical epidemiology studies – cohort research <i>Department of Hygiene, Epidemiology and Ergonomics</i>	5	-	-	5		Pass
Planning and interpretation of analytical epidemiology studies – clinical cohort research <i>Department of Hygiene, Epidemiology and Ergonomics</i>	5	-	-	5	Pass		
4.	Lecture by an international expert <i>Department of Neurodegeneration Diagnostics</i>	4	4	-	-	1	Pass
5.	Interdisciplinary summer school in the scope of lifestyle diseases <i>Director of the Doctoral School</i>	10	-	10	-	1	Pass
6.	Law in medicine <i>Department of Medical Law and Medical Deontology</i>	5	5	-	-	1	Pass
7.	Interdisciplinary lecture <i>Director of the Doctoral School/an invited expert</i>	5	5	-	-	1	Pass

8.	Didactic faculty (2 subjects to be selected – 10 h): – Interpersonal and Environmental Communication (5 h) <i>Department of Human Philosophy and Psychology</i> – Methods and assessment of study results (5 h) <i>Department of Human Philosophy and Psychology</i> – Didactics directed towards the student’s educational success (5 h) <i>Department of Human Philosophy and Psychology</i> – Psychopedagogy (5 h) <i>Department of Human Philosophy and Psychology</i> – Psychopedagogy diagnostics (5 h) <i>Department of Human Philosophy and Psychology</i> – Design thinking in theory and experimental practice (5 h) <i>Department of Bromatology</i> – Student Centred Learning (5 h) <i>Department of Bromatology</i> – Professionalism in medicine (5 h) <i>Department of Human Philosophy and Psychology</i>	10	-	10	-	1**	Pass
9.	Doctoral seminar II Presentation of an implementation of an individual research plan <i>Director of the Doctoral School</i>	10	-	10	-	1	Pass
10.	Conducting didactic classes <i>A designated MUB unit</i>	60	-	-	60	2	Pass
11.	Doctoral workshop II (Performance of the doctoral student’s individual research plan) <i>A designated MUB unit</i>	800	-	-	800	-	Pass
	Total	104 + 60 + 800	22	30	52 + 60 + 800	14	2 exams

* 2 ECTS points are going to be awarded after finishing 20 h of classes as part of the module “Progress in scientific research methodology II”

** 1 ECTS point is going to be awarded after finishing 15 h of classes as part of the module “Didactic Faculty”

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No.	Module/class name	Classes time				ECTS	Form of crediting a course
		Year III					
		Total	including				
Lectures	Seminars		Practical classes				
1.	Progress in the methodology of scientific research III (3 or 4 subjects to be selected – 20 h)	20	-	-	20	3 *	
	Metabolomics in the identification of disease biomarkers and pharmacotherapy targets <i>Department of Pharmaceutical and Biopharmaceutical Analysis</i>	10	-	-	10		Pass
	The use of in-vivo confocal microscopy in biomedical tests and in search for new medicinal products <i>Department of Biopharmacy</i>	5	-	-	5		Pass
	The use of immunoblotting techniques in biomedical-pharmaceutical studies <i>Department of Immunology</i>	5	-	-	5		Pass
	Receptor studies on isolated organs <i>Department of Experimental Physiology and Pathophysiology</i>	5	-	-	5		Pass
	Flow cytometry – the possibility to use in biomedical and pharmaceutical studies <i>Department of Pharmaceutical Biochemistry</i>	5	-	-	5		Pass
	The use of isoelectrofocusing methods in diagnosing neurodegenerative diseases <i>Department of Neurodegeneration Diagnostics</i>	5	-	-	5		Pass
	Clinical and experimental epidemiology <i>Department of Hygiene, Epidemiology and Ergonomics</i>	5	-	-	5		Pass
	Constructing an epidemiologic study protocol <i>Department of Hygiene, Epidemiology and Ergonomics</i>	5	-	-	5		Pass
	Meta-analysis <i>Department of Hygiene, Epidemiology and Ergonomics</i>	5	-	-	5		Pass
2.	Lecture by an international expert <i>Department of Neurodegeneration Diagnostics</i>	4	4	-	-	1	Pass
3.	Facultative classes II (1 or 2 subjects to be selected – 10 h) – Civilisational diseases as an interdisciplinary issue (5 h) <i>Department of Medicinal Chemistry</i> – Immunological aspects of biomedical - pharmaceutical studies (5 h) <i>Department of Immunology</i> – Advancements in molecular biology (5 h) <i>Department of Medical Chemistry</i> – Biotechnological methods in biomedical-pharmaceutical studies (5 h) <i>Department of Biotechnology</i> – Pharmacotherapy of cancer (5 h) <i>Department of Medicinal Chemistry</i> – Pre-clinical trials of new compounds with a potential meaning in the pathophysiology of the circulatory system (5 h) <i>Department of Experimental Physiology and Pathophysiology</i>	10	-	10	-	2 * *	Pass

	<ul style="list-style-type: none"> – Food and drug interactions (5 h) <i>Department of Bromatology</i> – Metabolomics (5 h) <i>Clinical Research Centre</i> – Planning, implementation and assessment of the results of programmes related to the health of population (10 h) <i>Department of Hygiene, Epidemiology and Ergonomics</i> – How to achieve scientific success in an international area (5 h) <i>Department of Human Philosophy and Psychology</i> 						
4.	Doctoral seminar III Methodology of studies carried out as part of the implementation of an individual research plan <i>Director of the Doctoral School</i>	15	-	15	-	1	Pass
5.	Conducting didactic classes <i>A designated MUB unit</i>	60	-	-	60	2	Pass
6.	Doctoral workshop III (Performance of the doctoral student's individual research plan) <i>A designated MUB unit</i>	800	-	-	800	-	Pass
	Total	49 + 60 + 800	4	25	20 + 60 + 800	9	-

* 3 ECTS points are going to be awarded after finishing 20 h of classes as part of the module "Progress in scientific research methodology III"

** 2 ECTS points are going to be awarded after finishing 15 h of classes as part of the module "Facultative classes II"

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No.	Module/class name	Classes time				ECTS	Form of crediting a course
		Year IV					
		Total	including				
Lectures	Seminars		Practical classes				
1.	Doctoral seminar IV Presentation of the results of doctoral thesis <i>Director of the Doctoral School</i>	10	-	10	-	1	Pass
2.	Conducting didactic classes <i>A designated MUB unit</i>	60	-	-	60	2	Pass
3.	Doctoral workshop IV (Performance of the doctoral student's individual research plan) <i>A designated MUB unit</i>	350	-	-	350	-	Pass
	Total	10 + 60 + 350	-	10	60 + 350	3	-

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