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
	University Health&Safety Inspector (Department of Hygiene, Epidemiology and Ergonomics)		2	-	-		
	MUB Unit where the doctoral student conducts scientific research		-	-	1		
	MUB Unit where the doctoral student conducts didactic classes		-	-	1		
2.	**Biostatistics in scientific research – primary statistical methods** *Department of Biostatistics and Medical Informatics*	20	6	-	14	2	**Exam**
3.	**Specialised English – developing academic language skills** *Department of Foreign Languages*	30	-	-	30	2	Pass
4.	**Bioethics and law in biomedical research**	10	-	10	-	1	Pass
	Department of Human Philosophy and Psychology		-	2	-		
	Department of Medicinal Chemistry		-	4	-		
	Department of Experimental Physiology and Pathophysiology		-	4	-		
5.	**Basics of entrepreneurship**	12	-	12	-	1	Pass
	Department of Medicinal Chemistry		-	3	-		
	MUB units indicated by the Director of the Doctoral School		-	9	-		
6.	**Methods for obtaining grants** *MUB unit indicated by the Director of the Doctoral School*	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 (*in vitro studies)* *Department of Medicinal Chemistry*	5	-	-	5		
	Molecular imaging methods in diagnostics and therapy *Department of Medicinal Chemistry*	5	-	-	5		
	Preventive medicine *Department of Population Medicine and Lifestyle Diseases Prevention*	5	-	-	5		
	Population studies – methodology, interpretation *Department of Population Medicine and Lifestyle Diseases Prevention*	5	-	-	5		
	Application of qualitative methods in health sciences *Department of Obstetrics, Gynaecology and Maternity Care*	5	-	-	5		
	Methods of gathering and analysis of data in epidemiology studies for the needs of restorative medicine *Department of Hygiene, Epidemiology and Ergonomics*	5	-	-	5		
	Methods of gathering and analysis of data in epidemiology studies for the needs of health promotion and disease prophylaxis *Department of Hygiene, Epidemiology and Ergonomics*	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

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

* 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"

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DOCTORAL SCHOOL PLAN – 2024/2025 academic year – in accordance with the 2023-2027 educational cycle

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

8.	**Didactic faculty** (2 subjects to be selected – 10 h): – **Interpersonal and Environmental Communication** (5 h) *Department of Human Philosophy and Psychology* – **Methods and assessment of study results** (5 h) *Department of Human Philosophy and Psychology* – **Didactics directed towards the student's educational success** (5 h) *Department of Human Philosophy and Psychology* – **Psychopedagogy** (5 h) *Department of Human Philosophy and Psychology* – **Psychopedagogy diagnostics** (5 h) *Department of Human Philosophy and Psychology* – **Design thinking in theory and experimental practice** (5 h) *Department of Bromatology* – **Student Centred Learning** (5 h) *Department of Bromatology* – **Professionalism in medicine** (5 h) *Department of Human Philosophy and Psychology*	10	-	10	-	1**	Pass
9.	**Doctoral seminar II** Presentation of an implementation of an individual research plan *Director of the Doctoral School*	10	-	10	-	1	Pass
10.	**Conducting didactic classes** *A designated MUB unit*	60	-	-	60	2	Pass
11.	**Doctoral workshop II** (Performance of the doctoral student's individual research plan) *A designated MUB unit*	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 10 h of classes as part of the module "Progress in scientific research methodology II"

** 1 ECTS point is going to be awarded after finishing 10 h of classes as part of the module "Didactic Faculty"

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DOCTORAL SCHOOL PLAN – 2025/2026 academic year – in accordance with the 2023-2027 educational cycle

No.	Module/class name	Classes time – Year III				ECTS	Form of crediting a course
		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 *Department of Pharmaceutical and Biopharmaceutical Analysis*	10	-	-	10		Pass
	The use of in-vivo confocal microscopy in biomedical tests and in search for new medicinal products *Department of Biopharmacy*	5	-	-	5		Pass
	The use of immunoblotting techniques in biomedical-pharmaceutical studies *Department of Immunology*	5	-	-	5		Pass
	Receptor studies on isolated organs *Department of Experimental Physiology and Pathophysiology*	5	-	-	5		Pass
	Flow cytometry – the possibility to use in biomedical and pharmaceutical studies *Department of Pharmaceutical Biochemistry*	5	-	-	5		Pass
	The use of isoelectrofocusing methods in diagnosing neurodegenerative diseases *Department of Neurodegeneration Diagnostics*	5	-	-	5		Pass
	Clinical and experimental epidemiology *Department of Hygiene, Epidemiology and Ergonomics*	5	-	-	5		Pass
	Constructing an epidemiologic study protocol *Department of Hygiene, Epidemiology and Ergonomics*	5	-	-	5		Pass
	Meta-analysis *Department of Hygiene, Epidemiology and Ergonomics*	5	-	-	5		Pass
2.	**Lecture by an international expert** *Department of Neurodegeneration Diagnostics*	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) *Department of Medicinal Chemistry* – **Immunological aspects of biomedical - pharmaceutical studies** (5 h) *Department of Immunology* – **Advancements in molecular biology** (5 h) *Department of Medical Chemistry* – **Biotechnological methods in biomedical-pharmaceutical studies** (5 h) *Department of Biotechnology* – **Pharmacotherapy of cancer** (5 h) *Department of Medicinal Chemistry* – **Pre-clinical trials of new compounds with a potential meaning in the pathophysiology of the circulatory system** (5 h) *Department of Experimental Physiology and Pathophysiology*	10	-	10	-	2 * *	Pass

	– **Food and drug interactions** (5 h) *Department of Bromatology* – **Metabolomics** (5 h) *Clinical Research Centre* – **Planning, implementation and assessment of the results of programmes related to the health of population** (10 h) *Department of Hygiene, Epidemiology and Ergonomics* – **How to achieve scientific success in an international area** (5 h) *Department of Human Philosophy and Psychology*						
4.	**Doctoral seminar III** Methodology of studies carried out as part of the implementation of an individual research plan *Director of the Doctoral School*	15	-	15	-	1	Pass
5.	**Conducting didactic classes** *A designated MUB unit*	60	-	-	60	2	Pass
6.	**Doctoral workshop III** (Performance of the doctoral student's individual research plan) *A designated MUB unit*	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 10 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 *Director of the Doctoral School*	10	-	10	-	1	Pass
2.	**Conducting didactic classes** *A designated MUB unit*	60	-	-	60	2	Pass
3.	**Doctoral workshop IV** (Performance of the doctoral student's individual research plan) *A designated MUB unit*	350	-	-	350	-	Pass
	Total	**10 + 60 + 350**	**-**	**10**	**60 + 350**	**3**	**-**

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