

Plan studiów obowiązujący od roku akademickiego 2023/2024

O/EI	Lp.	Name of the module (course)	ECTS	Hours (total)					Year I								Year II													
				Type of classes					1				2				3				4									
				Sum	WY	CA	LB	KW	SM	WY	CA	LB	KW	SM	Exam form	ECTS	WY	CA	LB	KW	SM	Exam form	ECTS	WY	CA	LB	KW	SM	Exam form	ECTS
Obligatory courses - A																														
Main courses																														
O	1	Advanced biochemistry BN	5	60	20		40			20	40			E	5															
O	2	Regulation of cellular processes BN	4	45	15	30			15	30			E	4																
O	3	Analysis of biomolecules BN	4	45		45					45				Pg	4														
O	4	Molecular evolution	1	15	15				15																					
O	5	Statistical methods in biology	2	30		30				30				Pg	2															
O	6	Innovations in environmental microbiology and sustainable development BN	1	15	15																									
O	7	Biochemical and molecular ecology BN	3	45	15	30																								
O	8	Molecular biology in entrepreneurship NHS	1	15			15																							
O	9	Synthetic biology	2	30		30																								
Main courses with elective modules																														
O	10	Advanced molecular biology ^a BN	6	60	20	40			20	40			E	6																
O	11	Molecular microbiology ^b BN	5	60	20	40			20	40			E	5																
O	12	Bioinformatics ^c BN	6	60		60																								
O	13	Foreign language	4	60		60																								
O	14	Diploma seminar (I module - Writing and presentation of scientific papers)	3	30					30				Pg	3																
O	15	Diploma thesis and final exam		8																										
Sum A				55	570	120	0	315	105	30	90	225	30	30	30	90	30	12	0	45	0	3		0	30	0	10			
Elective courses/modules - B																														
Elective courses for obligatory courses A-C (choice 1 of 2 for each course)																														
Elective courses for A																														
El	16	Protein bioengineering BN or	3	30			20												10	20	E	3								
El	17	Current topics in cell signaling BN		30	10		20																							
Elective courses for B																														
El	18	Microbial infectivity, drug resistance and diagnostics BN or	3	30	15		15											15	15	E	3									
El	19	Microbial genomics BN		30	15		15																							
Elective courses for C																														
El	20	Next-generation sequencing and beyond BN or		30			30																							
El	21	Molecular modelling BN		30			30																							
Module I or Module II - choice 1 of 2 (4 courses, 45 hours each)					16	180	60		120																					
Module I: Molecular biology for environment and industry																														
El	22	Molecular mechanisms of adaptation BN		45	15		30																							
El	23	Biocatalysis and biotransformation BN		45	15		30																							
El	24	Industrial microbiology BN		45	15		30																							
El	25	Biological control of plants BN		45	15		30																							
Module II: Molecular biology for medicine																														
El	26	Medical genetics and molecular diagnostics BN		45	15		30																							
El	27	Cellular and molecular immunobiology BN		45	15		30																							
El	28	Development of biomolecules with desired characteristics BN		45	15		30																							
El	29	Tumor biology BN		45	15		30																							
El	30	Diploma seminar II and III	6	60																										
El	31	Research project BN*	26	380		380												100	Pg	8	140	Pg	9	140	Pg	9				
El	32	Other elective courses - courses to be chosen from the given list	3	60															Pg	3										
El	33	Academic lecture	1	15	15												15	Pg	1											
El	34	Elective courses in Humanities and Social Sciences (two courses to be chosen from the given list) NHS	4	60	60															60		Pg	4							
Sum B				65	845	-	-	-	-	-		0	30	145				18	100	220	30	27	30	200	30	30	20			
SUM A+B				120	1415	-	-	-	-	-	90	225	30	30	60	235	30	30	100	220	45	30	30	30	200	30	30	30		
Hours in a semester / ECTS in a semester											345	30	385	30	395	30	395	30	60	685	60									
Hours in a year / ECTS in a year																														

Language of instruction - English

Symbols: WY-lecture, CA-exercises, LB-lab, KW-tutorial, SM-seminar, E-exam, Pg-pass with grade, O - obligatory course, El - elective course

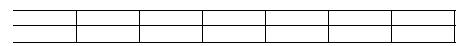
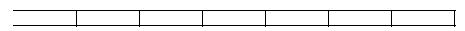
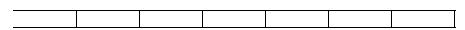
On-line trainings: Work Hygiene and Safety (4 hours), Ethics and Disciplinary Liability of Students (2 hours), Library Training (2 hours)

* Research project is of an experimental nature (praca dyplomowa ma charakter eksperymentalny)

BN courses related to the discipline of biological sciences

Zatwierdzony na posiedzeniu Senatu w dniu:

28 marca 2023 r.



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