Curriculum of Integrated (Bachelor's-Master's) Educational Program of Training of Basic/Secondary Level Physics, Chemistry and Biology Teacher

		2	Academic Semesters											
#	Studying / Research Component	Prerequisites	Credits	I	п	ш	IV	v	VI	VII	VIII	IX	x	
Mandat	ory study course of the free component- 29 credits	·												
1.	Computer skills	-	5	5										
2.	English language 1 (B1.1)	-	5	5										
3.	English language 2 (B1.2)	English language 1 (B1.1)	5		5									
4.	English language 3 (B2.1)	English language 2 (B1.2)	5			5								
5.	English language 4 (B2.2)	English language 3 (B2.1)	5				5							
6.	Academic writing	-	4		4									
Study co	ourses of a subject/subject group - 130 credits; including: m	andatory training courses - 121 credits												
7.	Mathematical analysis	-	6	6										
8.	Elements of Linear Algebra and analytic Geometry	-	6			6								
9.	Mechanics 1	-	6	6										
10.	Mechanics 2	Mechanics 1 Mathematical analysis	6		6									
11.	Thermodynamics	Mechanics 2	6			6								
12.	Electromagnetism 1	Mathematical analysis	6				6							
13.	Electromagnetism2	Electromagnetism 1	6					6						
14.	Optics	Linear Algebra and analytic Geometry s; Mechanics s 2	4						4					
15.	Quantum mechanics and relativism	Mechanics 2	3							3				
16.	Atomic Physics	Quantum mechanics and relativism	3								3			
17.	Modern Physics	Quantum mechanics and relativism	3									3		
18.	General Chemistry	Without prerequisite	5	5										

19.	Inorganic chemistry1	General Chemistry	5		5								
20.	Organic Chemistry 1	General Chemistry	5		5								
21.	Inorganic chemistry2	Inorganic chemistry1	5			5							
22.	Organic Chemistry 2	Organic Chemistry 1	5			5							
23.	Cellular and molecular Biology	Organic Chemistry 2	5				5						
24.	Biophysics	Cellular and molecular Biology ; English language B2.2	3					3					
25.	Microbiology	Cellular and molecular Biology	4					4					
26.	A general course in Botany	Cellular and molecular Biology	4					4					
27.	A general course in Zoology	Cellular and molecular Biology	4					4					
28.	Human Anatomy	Cellular and molecular Biology ; English language B2.2	4					4					
29.	Human Physiology	Human Anatomy ; Biophysics	4						4				
30.	Ecology	Without prerequisite	3						3				
31.	Genetics	Human Physiology	4							4			
32.	Biology of Development	Human Physiology	3							3			
33.	Evolution	Biology of Development	3								3		
Optiona	l courses of the subject/subject group - 9 credits			_					_	_			-
34.	Popular Chemistry	English language B2.2	3										
35.	Nanotechnologies	Without prerequisite	3								6	2	
36.	Applied Physics	Without prerequisite	3								/ 3+3	3	
37.	Bases of Immunology	Without prerequisite	3										

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38.	Bases of of Neurobiology	Human Physiology	3								
39.	Physical Geography	Without prerequisite	6								
Training	g courses of the teacher training module - 63 credits; includ	ing: mandatory training courses - 60 credits									
40.	Legal bases of the general education system	Without prerequisite	3	3							
41.	Education for democratic citizenship	Without prerequisite	3		3						
42.	Safe school and the ethics of school communication	Without prerequisite	4			4					
43.	General bases of pedagogy	Without prerequisite	-			5					
44.	General Basics of Pedagogy	English language B2.2	5			5					
45.	Teaching theories	Without prerequisite	5			5					
46.	Modern approaches to Teaching and Learning	General bases of pedagogy									
47.	Modern approaches of Teaching and Learning	General bases of pedagogy ; English language B2.2	5				5				
48.	Basic principles of inclusive education	Without prerequisite	4					4			
49.	Class assessment	Modern approaches of Teaching and Learning	4					4			
50.	Education for sustainable development	Without prerequisite	3					3			
51.	Physics teaching methodology1	Class assessment	5						5		
52.	Teaching Chemistry with tasks	Inorganic Chemistry 2; Class assessment	5						5		
53.	General methodology of teaching Biology	Class assessment	5						5		
54.	Physics teaching methodology 2	Physics teaching methodology 1	3							3	
55.	Modern methods of teaching Chemistry	Class assessment	3							3	
56.	Problem-based and research-based teaching methods in Biology	General methodology of teaching Biology	3							3	
Optiona	l training courses of the teacher training module - 3 credits										
57.	Media literacy	Without prerequisite	3								
58.	Intercultural education and pedagogical approaches	Without prerequisite	3					3			
59.	Information security management	English language B2.2	3								

Mandat	ory study courses/components of school practice and practic	ce research module - 60 credits										
60.	Innovative research methods in education	Without prerequisite	5						5			
61.	Practice-based research	Innovative research methods in education; English language B2.2	5							5		
62.	Diagnostic research and differentiated approach	Innovative research methods in education; English language B2.2	5								5	
63.	Pedagogical Practice 1	Physics teaching methodology 2; modern methods of teaching Chemistry; Problem-based and research-based teaching methods in Biology.	15								15	
64.	Pedagogical Practice 2	Pedagogical Practice 1	10									10
65.	Master's thesis	I-IX semester subject/subject group and teacher training module training courses; diagnostic research and differentiated approach; Pedagogical practice 1.	20									20
Optiona	l study course of the free component -18 credits		0 5 0 0 5 0 4 4				4	0				
66	Introduction to Informatics	Without prerequisite	5		5			5				
67	Introduction to web technologies	Computer skills	5		5			5				
68	General Astronomy	Without prerequisite	5		5			5				
69	Database management systemMs SQL Server	Computer skills	5		5			5				
70	The role of the educational program in the formation of the student	Without prerequisite	4							4	4	
71	Knowledge and value education	Without prerequisite	5		5			5				
72	Methodology of teaching natural science	Class assessment	4							4	4	
73	The art of debate	Without prerequisite	4							4	4	
74	English language A1	Without prerequisite	5	5 ¹								
75	English language A2	English language A1	5		5							

Credits distribution according to semesters	30	30	30	30	30	30	30	30	30	30		
Total			300 ECTS									

Note:

1. Confirmation of knowlegde of English language at the B2 level or achievement within the program is mandatory. The student confirms the level of knowledge of the English language in accordance with the "Rule for determining the language competence of a student of European University";

2. Within the framework of the program, the student starts learning English from the level confirmed by the "Rules for determining the language competence of a student of European University". In case the student cannot prove his/her knowledge of the English language at the A2 level, he/she starts studying the English language within the program from the appropriate level confirmed according to the mentioned rule (English language A1 / English language A2). The levels required to start at the B1.1 level of English (English language A1 / English language A2) are chosen by the student from the optional courses of the free component provided by the program;

3. In case the student confirms his/her knowledge of the English language at the B2 level in accordance with the "Rule for determining the language competence of a student of European university, he/she is exempted from the acquisition of the English language component and acquires the credits (20 credits) of the main field of study with optional courses or free credits. Whether the level confirmed by the student is higher than the initial level defined by the program (B1.1), the student fills up the volume of remaining credits with optional courses or free credits of the main field of study.