

**Information
on education programs of Bachelor (5B080800 - Soil Science and Agricultural Chemistry)
and of Master (6M080800 - " Soil Science and Agricultural Chemistry")**

The objective of the EP of Bachelor is training of the specialists of new formation on soil science and agricultural chemistry, competitive and sought after in the agricultural sector, and international scientific and educational space, based on moral, aesthetic, professional and scientific values.

The objective of the EP of Magistracy is training of the specialists with a high level of the professional culture, having citizenship able to formulate and solve scientific and practical problems, conduct research, management and teaching.

There are 189 students in bachelor, including 93 students who studies in the state language, 29 students are on a fee - based contract in 2013-2014. There are 20 students in the master's degree in the state grant.

Kazakh agro technical university named after S.Seifullin received a license to conduct educational activities for PhD doctoral specialty 6D080800 of Soil Science and Agricultural Chemistry since 2013.

The educational environment in which there is a formation of Soil Science - agro chemists - is the relationship conditions for the formation of personality, capable of active creativity in various areas of the basic and applied sciences. Its 55 years foundation tradition and image of Kazakh agro technical university named after S.Seifullin , modern technologies, developing training system electives, elective courses , intellectual competitions at various levels of support for talented students; social support for students, extracurricular activities .

The department of Soil Science and the Agricultural Chemistry are one of the first of the departments created in 1958 Tselinograd Agricultural Institute and has a high scientific and pedagogical personnel potential. At the beginning of the 2013-2014 academic year, the number of faculty and teaching staff are 20 employees, of whom 16 teaching staff. The department has 3 professors, 2 associate professors, 8 senior lecturers, 6 assistants, a senior laboratory and 3 technicians. Two teachers of the department are possessors of state grant "The best teacher of the university." The average age of the teaching staff is 40 years. Concurrently, work practices are 1 Ph.D., professor, 1 PhD, associate professor, 1 master.

The department has a contract with specialized research institutes, NIU on the organization and practical base joint cooperation : NPTsZem , NPC GB named after A.I.Baraev, RSMC " Agrohimsluzhba ", LLP " KazNII rice ", LLP " KazNII agriculture and plant ", LLP " KazNIISoil science and Agro chemistry named after U.Uspanov "; LLP" KazNIIkartofelevodstva and Horticulture ", LLP" Southwest Research Institute of Animal and Plant "; " Agro firm Ақтүк ", JSC" Niva ".

For the training focused on the formation of the professional competence, the Department provided the spot training in specialized institutes, centers, inviting leading scholars to give lectures to the senior students, undergraduates.

The classrooms are equipped with chair modern educational technology; operate two research laboratories with modern equipments and instruments; the museum has soils of northern Kazakhstan, which are the basis of the exposition soil monoliths.

In accordance with the requirements of the loan program was developed and published teaching literature on specialty disciplines of resent years: Fundamentals of Soil Science and Geology , History and Development of Soil Science (Tutorial) The structure and soil fertility ; Nitrogen regime of soils of northern Kazakhstan and the use of nitrogen fertilizers; organization of field practice , etc.

The staff of the department conducted research within the grant funding, budget and programs MES and the Ministry of Agriculture of last three years, on a contractual basis and enterprising subjects with an average funding of 13 750.0 thousand. The results of research are included the learning process during the lectures and workshops.

With the implementation of educational programs at the Department special paid attention to the involvement of students research : implementation of software projects and dissertations ; prizes for participation in the Republican Subject Olympiad ; involvement in R & D department , the university and republican competitions of student research papers , participation in national and international scientific conferences of young scientists and students participate in the scientific circle "Fertility " and so on.

Students of participating in external and internal academic mobility in Germany under an agreement with the Union LOGO ; named after D.Pryanishnikov in the Perm State Agricultural Academy , the Bashkir State Agrarian University ; GAU named after P.Stolypin in Omsk , in KazNAU .

Majoring 5V080800 - «Soil Science and Agricultural Chemistry «trained students from Tajikistan and Afghanistan.

Graduates ETA specialty of " Soil Science and Agricultural Chemistry " work in various sectors of the economy : "Astana ormany " LLP, " Novorybinsky and K" , "Samruk - Kazyna" , MA, LLP " Astykzhan " LLP, " Fitovetsanitariya " NPTsZem , Kazakh agro technical univers ity named after S.Seifullin etc. The share of employed graduates averaged 84% three years ago.

Thus, the educational programs for bachelors and masters for Soil Science and Agricultural industries are focused of creating and improving educational environment conducive to the formation of a self-sustaining and self-fulfilling personality based on the introduction of competence-based approach to education and the educational process.

Academic calendar in 2013 -2017 Specialty: 5B080800 – Soil Science and Agro chemistry Study program: «Agrology», «Agro chemistry»

III.Академический календарь на 2013-2017 гг.

Пд - преддипломная практика

Д - дипломное проектирование

С - экзаменационная сессия

Л - летний семестр

П - презентационная неделя

Проверка ... 20

/ - государственный экзамен

// - защита дипломных проектов

Каникулы

РК - рубежный контроль

*** Русск.

O - обзор лекции

У - учебные практики

Э - экзамены

IV Content of the educational program "Agrochemistry"

Cycle / Component	discipline code	Name of discipline	RK credits / ECTS	Semester	Control Semester				TOTAL	Quantity of hours				Distribution on the courses and semesters																										
					exams	tests	course projects	coursework		Class work		Independent work		1 course		2 course		3 course		4 course																				
										classroom	lecture	laboratory	practical	SSST	SSS	1 sem	2 sem	3 sem	4 sem	5 sem	6 sem	7 sem	8 sem																	
																weeks in semester																								
Module 1 Social and political discipline- 11 credits																																								
CD/MC	HK1101	History of Kazakhstan	3/5	1					135	45	15		30	22,5	90,0	3																								
CD/MC	Phil 2111	Philosophy	3/5	4					135	45	30		15	22,5	90,0								3																	
CD/MC	Soc 1104	Sociology	2/3	1					90	30	15		15	15	60	2																								
CD/CS	Rel2105	Religious	1/2	1					45	15	15		0	15	30	1																								
CD/MC	Pol 2110	Political science	2/3	4					90	30	15		15	15	60								2																	
Total Module 1			11/18						0	0	0	0	495	165	90	0	75	90	330	6	0	0	5	0	0	0														
Module 2 Languages- 12 credits																																								
CD/MC	K(R)Ya1106	Kazakh (Russian) language	6/10	1,2					270	90			90	45	180	3	3																							
CD/MC	Iya 1108	Foreign Language	6/10	1,2					270	90			90	45	180	3	3																							
Total Module2			12/20,0						0	0	0	0	540	180	0	0	180	90	360	6	6	0	0	0	0	0														
Module 3 General disciplines -11 credits																																								
CD/MC	Inf 1102	Informatics	3/5	2					135	45	15		30	22,5	90,0	3																								
CD/MC	OET2107	Basic economic theory	2/3	3					90	30	15		15	15	60								2																	
CD/MC	OP 2109	Foundations of Law	2/3	4					90	30	15		15	15	60									2																
CD/MC	EUR 1105	Environment and Sustainable development	2/3	2					90	30	15		15	15	60								2																	
CD/MC	OBZh 1103	Basics of life safety	2/3	2					90	30	15		15	15	60,0																									
Total Module 3			11/17,0						0	0	0	0	495	165	75	0	90	83	330	3	4	2	2	0	0	0														
Module 4 Professional languages -4 credits																																								
BD/MC	PK(R)L 3201	Professional Kazakh (Russian) language	2/3,0	5					90	30			30	15	60								2																	
BD/MC	P-OFL 3202	Professionally Oriented Foreign Language	2/3,0	5					90	30			30	15	60								2																	
Total Module 4			4/6,0						0	0	0	0	180	60	0	0	60	30	120	0	0	0	0	4	0	0														

Cycle / Component	discipline code	Name of discipline	RK credits / ECTS	Semester	Control Semester				TOTAL	Quantity of hours				Distribution on the courses and semesters								
					exams	tests	course projects	coursework		Class work		Class work		1 course	2 course	3 course	4 course					
										classroom	lecture	laboratory	practical	1 sem	2 sem	3 sem	4 sem	5 sem	6 sem	7 sem	8 sem	
										SSST	weeks in semester		SSS	15	15	15	15	15	15	15	15	
Module 5 Chemistry part 1. 7 credits																						
BD/MC	Him 1203	Chemistry	4/7,0	1,2					180	75	30	45		30	105	2	2					
BD/CS	FH 1205	Physical and Colloid Chemistry	3/3,0	3					90	30	15	15		15	60			3				
Total Module 5			7/12,0		0	0	0	0	270	105	45	60	0	45	165	2	2	3	0	0	0	
Module 6 Biological part1. 5 credits																						
BD/MC	Biol 1204	Biology 1	3/5,0	1					135	45	30	15		22,5	90	3						
BD/CS	Biol 1204	Biology 2	2/5,0	2					90	30	15	15		22,5	60		2					
Total Module 6			5/10,		0	0	0	0	225	75	45	30	0	45	150	3	2	0	0	0	0	
Module 6 Biological part2. 9 credits																						
BD/CS	Geo 2208	Geobotany	3/5,0	3					135	45	30	15		22,5	90		3					
BD/CS	Mik 2208	Microbiology	3/5,0	3					135	45	30	15		22,5	90		3					
BD/CS	BP 2209	Soil biology	3/5,0	4					135	45	30	15		22,5	90			3				
Total on 6 module			9/15,0		0	0	0	0	405	135	90	45	0	68	270	0	0	6	3	0	0	
Module 7 General geology 3 credits																						
BD/MC	OG 1205	General Geology	3/5,0	2					135	45	30	15		22,5	90		3					
Total Module 7			3/5,0		0	0	0	0	135	45	30	15	0	23	90	0	3	0	0	0	0	
Module 8- Soil Science, part 1. 5 credits																						
BD/MC	OP 2206	Bases of Soil Science	3/5,0	4					135	45	30	15		22,5	90			3				
BD/CS	IRPA 2212	History of development of Soil Science and Agrichemistry	3/5,0	1					135	45	30	15		15	90		3					
Total Module 8			5/8,0		0	0	0	0	270	90	60	30	0	38	180	0	3	0	3	0	0	
Module 8- Soil Science, part 2. 11 credits																						
PD/MC	AP 3301	Agrology	2/3,0	5					90	30	15	15		15	60			2				
BD/CS	PK 3213	Soils of Kazakhstan	3/5,0	6					135	45	30	15		22,5	90			3				
PD/CS	KP 3302	Mapping of soils	3/5,0	6					135	45	30	15		22,5	90			3				

Cycle / Component	discipline code	Name of discipline	RK credits / ECTS	Semester	Control Semester					TOTAL	Quantity of hours				Distribution on the courses and semesters									
					exams	tests	Class work		Class work	Class work	Class work		Class work		1 course	2 course	3 course		4 course					
							classroom	lecture			classroom	lecture	laboratory	practical	SSST	SSS	1 sem	2 sem	3 sem	4 sem	5 sem	6 sem	7 sem	8 sem
PD/CS	OP 3303	Soil protection	3/5,0	7						135	45	30	15		22,5	90								3
Total Module 8			11/18,0		0	0	0	0	0	495	165	105	60	0	83	330	0	0	0	0	2	6	3	0
Module 9. Plant growing and agriculture, part1. 10 credits																				weeks in semester				
BD/CS	Zem 2215	Agriculture	4/7,0	3						180	75	30	30	15	30	105			4					
BD/MC	Ras 2207	Crop growing	3/5,0	4						135	45	15	30		22,5	90								3
BD/CS	PK 2217	Field fodder	3/5,0	3						135	45	30	15		22,5	90								3
Total Module 9			10/17,0		0	0	0	0	0	450	165	75	75	15	75	285	0	0	7	3	0	0	0	0
Module 9- Plant growing and agriculture, part 2. -2credits																				weeks in semester				
BD/CS	Ovo 4219	Vegetables culture	2/3,0	5						90	30	15	15		15	60							2	
Total Module 9			2/3,0		0	0	0	0	0	90	30	15	15	0	15	60	0	0	0	0	2	0	0	0
Module 10- Plant protection -5 credits																				weeks in semester				
BD/CS	VBR 3220	Plant pests and diseases	2/3,0	5						90	30	15	15		15	60							3	
BD/CS	HZR 3221	Chemical plant protection	3/5,0	6						135	45	30	15		22,5	90							2	
Total Module10			5/8,0		0	0	0	0	0	225	75	45	30	0	38	150	0	0	0	0	3	2	0	0
Module 11-Agricultural machines - 4 credits																				weeks in semester				
BD/CS	MSH 2222	Mechanization of agriculture	4/7,0	3, 4						180	75	30	30	15	30	105			2	2				
Total Module 11			4/7,0	3, 4	0	0	0	0	0	180	75	30	30	15	30	105	0	0	2	2	0	0	0	0
Module 12- Economy and management -2 credits																				weeks in semester				
BD/CS	OMM 4223	Fundamentals of Management and Marketing	2/3,0	6						90	30	15		15	15	60							2	
Tota lModule12			2/3,0	6	0	0	0	0	0	90	30	15	0	15	15	60	0	0	0	0	2	0	0	0
Module 13- Agrochemistry and bases of agrochemical researches, part 1. 7 credits																				weeks in semester				
PD/MC	Agr 3302	Agrochemistry	3/5,0	6						135	45	15	30		22,5	90							3	
PD/CS	ARP 3307	Agrochemistry of plants and soil	4/7,0	5						180	75	30	45		30	105							4	
PD/CS	OAI 3308	Bases of agrochemistry researches	2/3,0	6						90	30	15	15		15	60							2	

Cycle / Component	discipline code	Name of discipline	RK credits / ECTS	Semester	Control Semester				Total	Quantity of hours				Distribution on the courses and semesters										
					exams	tests	Class work		Total	Class work		Class work		1 course		2 course		3 course		4 course				
							Class work	Class work		lecture	laboratory	practical	SSST	SSS	1 sem	2 sem	3 sem	4 sem	5 sem	6 sem	7 sem	8 sem		
							Class work	Class work		SSST	SSS	weeks in semester		15	15	15	15	15	15	15	15			
PD/CS	SUKOZ 3309	System fertilize of crops in irrigated agriculture	3/5,0	7					135	45	30	15		22,5	90						3			
PD/CS	EPH 33010	Environmental problems of chemicalization	3/5,0	5					135	45	30	15		22,5	90						3			
PD/CS	AMSK 3311	Monitoring and agrochemical cartograms	2/3,0	6					90	30	15	15		15	60						2			
Total Module 13			17/28				0	0	0	0	765	270	135	135	0	128	495	0	0	0	7	7	3	0
Module 13- Agrochemistry and bases of agrochemical researches part 2. 6 credits																								
PD/CS	UOPK 4310	Fertilizer and vegetable fruit and berry crops	3/5,0	7					135	45	15	30		22,5	90							3		
PD/CS	SPU 4311	System of application of fertilizer	3/5,0	7					135	45	15	30		22,5	90							3		
Total Module 13			6/10				0	0	0	0	270	90	30	60	0	45	180	0	0	0	0	0	6	0
Module 14- Land law , Land management and Protection of work -7 credits																								
BD/CS	ZP 4224	Land law	2/3,0	7					90	30	15		15	22,5	60							2		
BD/CS	ZOG 4312	Land management with the basics of geodesy	2/3,0	7					90	30	15		15	15	60							2		
PD/CS	MZ 4313	Reclamation and restoration of agricultural land	2/3,0	7					90	30	15		15	15	60							2		
BD/CS	OT 4314	Protection of work	1/2,0	6					45	30	15		15		15							1		

Total Module 14			7/11			0	0	0	0	315	120	60	0	60	53	195	0	0	0	0	1	6	0	
Cycle of general disciplines -34 credits																								
1		Mandatory component	33							1485	495	150	0	345	248	990	14	10	2	7	0	0	0	0
		Component selection	1							45	15	15	0	0	15	30	1	0	0	0	0	0	0	0
		In total	34							1530	510	165	0	345	263	1020	15	10	2	7	0	0	0	0
Cycle of base disciplines -65 credits																								
1		Mandatory component	20							900	315	135	120	60	150	585	5	5	0	6	4	0	0	0
2		Component selection	45							1980	705	390	225	90	323	1275	0	5	18	5	5	8	4	0
		In total	65							2880	1020	525	345	150	473	1860	5	10	18	11	9	8	4	0
Cycle of profiling disciplines -32 credits																								
1		Mandatory component	5							225	75	30	45	0	37,5	150	0	0	0	0	2	3	0	0
2		Component selection	28							1260	465	210	150	105	218	795	0	0	0	0	7	8	13	0
		In total	33							1485	540	240	195	105	255	945	0	0	0	0	9	11	13	0
Code of discipline	Name of discipline	132			0	0	0	0		5895	2070	930	540	600	990	3825	20	20	20	18	18	5	12	0
		28								1260	465	210	150	105	218	795	0	0	0	0	7	8	13	0
		33								1485	540	240	195	105	255	945	0	0	0	0	9	11	13	0
		132			0	0	0	0		5895	2070	930	540	600	990	3825	20	20	20	18	18	9	2	0
		28								1260	465	210	150	105	218	795	0	0	0	0	7	8	13	0
		33								1485	540	240	195	105	255	945	0	0	0	0	9	11	13	0
	Total theoretical study (credits)	132			0	0	0	0		5895	2070	930	540	600	990	3825	20	20	20	18	18	19	17	0
Additional types of training (ATT)																								
Mandatory component (MC)																								
	FK 1101-2101	Physical culture	16			1,2, 3,4				720	360			240	120	360	4	4	4	4				
		Professional practice	18			2,4, 6				675									6		6		6	
		Total	34							1395	360			240	120	360	4	10	4	10	0	6	0	0
Component of selection (CS)																								
	MT	Military training																						
		Final certification	3	3	8					270	0								270					
		Total on study plane	169							7560	2430	930	540	840	1110	4185	24	30	24	28	18	25	17	0

Professional practice, including to:		Semester	Quantity of credits	Quantity of weeks	Quantity of hours	Final certification including to:	Semester	Quantity of credits	Quantity of weeks	Quantity of hours
training		2	6	1	30	State exams	8	1	2	105
Technology		4	6	1	30	Writing and defense of the thesis (diploma project)	8	2	4	210
Production and undergraduate		6	6	10	300					
in total			18	12	360			3	6	315

IV Content of the educational program "Agrology"

Cycle / Component	discipline code	Name of discipline	RK credits / ECTS	Semester	Control Semester				TOTAL	Quantity of hours					Distribution on the courses and semesters																							
					exams	tests	course projects	coursework		Class work			Independent work		1 course		2 course		3 course		4 course																	
										classroom	lecture	laboratory	practical	SSST	SSS	1 sem	2 sem	3 sem	4 sem	5 sem	6 sem	7 sem	8 sem															
																weeks in semester																						
Module 1- Social and political discipline -11 credits																																						
CD/MC	HK1101	History of Kazakhstan	3/5	1						135	45	15		30	22,5	90,0	3																					
CD/MC	Phil 2111	Philosophy	3/5	4						135	45	30		15	22,5	90,0					3																	
CD/MC	Soc 1104	Sociology	2/3	1						90	30	15		15	15	60	2																					
CD/CS	Rel2105	Religious	1/2	1						45	15	15		0	15	30	1																					
CD/MC	Pol 2110	Political science	2/3	4						90	30	15		15	15	60				2																		
Total Module1			11/18							495	165	90	0	75	90	330	6	0	0	5	0	0	0															
Module 2- Languages-12 credits																																						
CD/MC	K(R)Ya1106	Kazakh (Russian) language	6/10	1,2						270	90			90	45	180	3	3																				
CD/MC	Iya 1108	Foreign Language	6/10	1,2						270	90			90	45	180	3	3																				
Total Module 2			12/20,0							540	180	0	0	180	90	360	6	6	0	0	0	0	0															
Module 3- General disciplines -11 credits																																						
CD/MC	Inf 1102	Informatics	3/5	2						135	45	15		30	22,5	90,0	3																					
CD/MC	OET2107	Basic economic theory	2/3	3						90	30	15		15	15	60			2																			
CD/MC	OP 2109	Foundations of Law	2/3	4						90	30	15		15	15	60			2																			
CD/MC	EUR 1105	Environment and Sustainable development	2/3	2						90	30	15		15	15	60			2																			
CD/MC	OBZh 1103	Basics of life safety	2/3	2						90	30	15		15	15	60,0	2																					
Total Module 3			11/17,0							495	165	75	0	90	83	330	3	4	2	2	0	0	0															
Module 4-Professional languages -4 credits																																						
BD/MC	PK(R)L 3201	Professional Kazakh (Russian) language	2/3,0	5						90	30			30	15	60					2																	
BD/MC	P-OFL 3202	Professionally Oriented Foreign Language	2/3,0	5						90	30			30	15	60				2																		
Total Module 4			4/6,0							180	60	0	0	60	30	120	0	0	0	4	0	0	0															

Cycle / Component	discipline code	Name of discipline	RK credits / ECTS	Semester	Control Semester					TOTAL	Quantity of hours					Distribution on the courses and semesters								
					exams	tests	course projects	coursework	control work		Class work			Class work		1 course		2 course		3 course		4 course		
											classroom	lecture	laboratory	practical	SSST	SSS	1 sem	2 sem	3 sem	4 sem	5 sem	6 sem	7 sem	8 sem
Module 5- Chemistry part1- 7 credits																					weeks in semester			
BD/MC	Him 1203	Chemistry	4/7,0	1,2						180	75	30	45		30	105	2	2						
BD/CS	FH 1205	Physical and Colloid Chemistry	3/3,0	3						90	30	15	15		15	60			3					
Total Module 5			7/12,0		0	0	0	0	0	270	105	45	60	0	45	165	2	2	3	0	0	0	0	
Module 6-Biological part1- 5 credits																								
BD/MC	Biol 1204	Biology 1	3/5,0	1						135	45	30	15		22,5	90	3							
BD/CS	Biol 1204	Biology 2	2/5,0	2						90	30	15	15		22,5	60		2						
Total Module 6			5/10,		0	0	0	0	0	225	75	45	30	0	45	150	3	2	0	0	0	0	0	
Module 6- Biological 2 part - 9 credits																								
BD/CS	Geo 2208	Geobotany	3/5,0	3						135	45	30	15		22,5	90			3					
BD/CS	Mik 2208	Microbiology	3/5,0	3						135	45	30	15		22,5	90			3					
BD/CS	BP 2209	Soil biology	3/5,0	4						135	45	30	15		22,5	90			3					
Total Module 6			9/15,0		0	0	0	0	0	405	135	90	45	0	68	270	0	0	6	3	0	0	0	
Module 7-General geology- 3 credits																								
BD/MC	OG 1205	General Geology	3/5,0	2						135	45	30	15		22,5	90		3						
Total Module 7			3/5,0		0	0	0	0	0	135	45	30	15	0	23	90	0	3	0	0	0	0	0	
Module 8- Soil Science, part 1-5 credits																								
BD/MC	OP 2206	Bases of Soil Science	3/5,0	4						135	45	30	15		22,5	90			3					
BD/CS	IRPA 2212	History of development of Soil Science and Agrichemistry	3/5,0	1						135	45	30	15		15	90		3						
Total Module 8			5/8,0		0	0	0	0	0	270	90	60	30	0	38	180	0	3	0	3	0	0	0	
Module 8- Soil Science, part 2-11 credits																								
PD/MC	AP 3301	Agrology	2/3,0	5						90	30	15	15		15	60			2					
BD/CS	PK 3213	Soils of Kazakhstan	3/5,0	6						135	45	30	15		22,5	90				3				
PD/CS	KP 3302	Mapping of soils	3/5,0	6						135	45	30	15		22,5	90				3				

Cycle / Component	discipline code	Name of discipline	RK credits / ECTS	Semester	Control Semester					TOTAL	Quantity of hours					Distribution on the courses and semesters									
					exams	tests	Class work				practical	Class work		Class work		1 course		2 course		3 course		4 course			
							classroom		lecture	laboratory		SSST		SSS		1 sem	2 sem	3 sem	4 sem	5 sem	6 sem	7 sem	8 sem		
																weeks in semester									
								15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15		
PD/CS	SP 3403	Soil protection	3/5,0	7						135	45	30	15		22,5	90								3	
PD/CS	SG 3303	Soil geography	3/5,0	5						135	45	30	15		22,5	90								3	
PD/CS	MSR 3304	Methods of soil researches	2/3,0	6						90	45	15		30	15	45								2	
PD/CS	BS3305	Bonitation of soils	3/5,0	6						135	45	15		30	22,5	90								3	
PD/CS	MP 3406	Meliorative soil science	2/3,0	6						90	45	15		30	22,5	45								2	
Total Module 8			21/35				0	0	0	0	945	345	180	75	90	165	600	0	0	0	0	5	11	5	0
Module 9- Plant growing and agriculture, 1st part-10 credits																									
BD/CS	Zem 2215	Agriculture	4/7,0	3						180	75	30	30	15	30	105			4						
BD/MC	Ras 2207	Crop growing	3/5,0	4						135	45	15	30		22,5	90								3	
BD/CS	PK 2217	Field fodder	3/5,0	3						135	45	30	15		22,5	90								3	
Total Module 9			10/17,0				0	0	0	0	450	165	75	75	15	75	285	0	0	7	3	0	0	0	
Module 9- Plant growing and agriculture, 2nd part -2credits																									
BD/CS	Ovo 4219	Vegetables culture	2/3,0	5						90	30	15	15		15	60						2			
Total Module 10			2/3,0				0	0	0	0	90	30	15	15	0	15	60	0	0	0	0	2	0	0	
Module 10- Plant protection -5 credits																									
BD/CS	VBR 3220	Plant pests and diseases	2/3,0	5						90	30	15	15		15	60						3			
BD/CS	HZR 3221	Chemical plant protection	3/5,0	6						135	45	30	15		22,5	90								2	
Total Module 10			5/8,0				0	0	0	0	225	75	45	30	0	38	150	0	0	0	0	3	2	0	
Module 11-Agricultural machines - 4 credits																									
BD/CS	MSH 2222	Mechanization of agriculture	4/7,0	3, 4						180	75	30	30	15	30	105			2	2					
Total Module 11			4/7,0	3, 4			0	0	0	0	180	75	30	30	15	30	105	0	0	2	2	0	0	0	
Module 12- Economy and management -2 credits																									
BD/CS	OMM 4223	Fundamentals of Management and Marketing	2/3,0	6						90	30	15		15	15	60						2			

Cycle / Component	discipline code	Name of discipline	RK credits / ECTS	Semester	Control Semester				Total	Quantity of hours					Distribution on the courses and semesters									
					exams	tests	Class work	Class work		Class work		Class work			1 course	2 course	3 course	4 course						
										classroom	lecture	laboratory	practical	SSST	SSS	1 sem	2 sem	3 sem	4 sem	5 sem	6 sem	7 sem	8 sem	
																weeks in semester								
										15	15	15	15	15	15	15	15	15	15	15	15	15	15	
Total Module 12			2/3,0	6	0	0	0	0	90	30	15	0	15	15	60	0	0	0	0	0	2	0	0	
Module 13- Agrochemistry and bases of agrochemical researches, 1st part - 7 credits																								
PD/MC	Agr 3302	Agrochemistry	3/5,0	6						135	45	15	30		22,5	90						3		
PD/CS	ARP 3307	Agrochemistry of plants and soil	4/7,0	5						180	75	30	45		30	105						4		
Total Module 13			7/12,0		0	0	0	0	315	120	45	75	0	52,5	195	0	0	0	0	4	3	0	0	
Module 13- Agrochemistry and bases of agrochemical researches, 2nd part -6 credits																								
PD/CS	UOPK 4310	Fertilizer and vegetable fruit and berry crops	3/5,0	7						135	45	15	30		22,5	90						3		
PD/CS	SPU 4311	System of application of fertilizer	3/5,0	7						135	45	15	30		22,5	90						3		
Total Module 13			6/10		0	0	0	0	270	90	30	60	0	45	180	0	0	0	0	0	6	0	0	
Module 14- Land law , Land management and Protection of work -7 credits																								
BD/CS	ZP 4224	Land law	2/3,0	7						90	30	15		15	22,5	60						2		
BD/CS	ZOG 4312	Land management with the basics of geodesy	2/3,0	7						90	30	15		15	15	60						2		
PD/CS	MZ 4313	Reclamation and restoration of agricultural land	2/3,0	7						90	30	15		15	15	60						2		
BD/CS	OT 4314	Protection of work	1/2,0	6						45	30	15		15	15	15						1		
Total Module 14			7/11		0	0	0	0	315	120	60	0	60	53	195	0	0	0	0	1	6	0	0	

Cycle of general disciplines -34 credits

1		Mandatory component	33					1485	495	150	0	345	248	990	14	10	2	7	0	0	0	0	
		Component selection	1					45	15	15	0	0	15	30	1	0	0	0	0	0	0	0	0
		In total	34					1530	510	165	0	345	263	1020	15	10	2	7	0	0	0	0	0

Cycle of base disciplines -65 credits

1		Mandatory component	20					900	315	135	120	60	150	585	5	5	0	6	4	0	0	0	
2		Component of selection	45					1980	705	390	225	90	323	1275	0	5	18	5	5	8	4	0	0
		In total	65					2880	1020	525	345	150	473	1860	5	10	18	11	9	8	4	0	0

Cycle of profiling disciplines -32 credits

1		Mandatory component	5					225	75	30	45	0	37,5	150	0	0	0	0	2	3	0	0
2		Component of selection	28					1260	465	210	150	105	218	795	0	0	0	0	7	8	13	0
		In total	33					1485	540	240	195	105	255	945	0	0	0	0	9	11	13	0
Code of discipline	Name of discipline	132		0	0	0	0	5895	2070	930	540	600	990	3825	20	20	20	18	18	5	12	0
		28						1260	465	210	150	105	218	795	0	0	0	0	7	8	13	0
		33						1485	540	240	195	105	255	945	0	0	0	0	9	11	13	0
		132		0	0	0	0	5895	2070	930	540	600	990	3825	20	20	20	18	18	9	2	0
		28						1260	465	210	150	105	218	795	0	0	0	0	7	8	13	0
		33						1485	540	240	195	105	255	945	0	0	0	0	9	11	13	0
	Total theoretical study (credits)	132		0	0	0	0	5895	2070	930	540	600	990	3825	20	20	20	18	18	19	17	0

Additional types of training (ATT)

FK 1101-2101	Physical culture	16		1,2, 3,4				720	360			240	120	360	4	4	4						
	Professional practice	18		2,4, 6				675										6		6		6	
	Total	34						1395	360			240	120	360	4	10	4	10	0	6	0	0	

MT	Military training																						
	Final certification	3	3	8				270	0									270					6
	Total on study plane	169						7560	2430	930	540	840	1110	4185	24	30	24	28	18	25	17	0	

Professional practice, including to:		Semester	Quantity of credits	Quantity of weeks	Quantity of hours	Final certification including to:	Semester	Quantity of credits	Quantity of weeks	Quantity of hours
training		2	6	1	30	State exams	8	1	2	105
Technology		4	6	1	30	Writing and defense of the thesis (diploma project)	8	2	4	210
Production and undergraduate		6	6	10	300					
in total			18	12	360			3	6	315

Work study plane of Masters programme on specialty 6M080800 Soil science and Agrochemistry 2013-2015 years

Cycle / Component	discipline code	Name of discipline	RK credits / ECTS	Semester	Control on Semesters			Quantity of hours						Distribution on the courses and semesters			
					exams	tests	Report on practice	Total	classroom	including		SSMT	SSM	1 course		2 course	
										lecture	practical			1 sem	2 sem	3 sem	4 sem
BDK-1		Base disciplines, total	20	32				900	300	105	195	120	480	9	11	0	0
MC 1.1		Mandatory component	8	12				360	120	45	75	60	180	6	2	0	0
Module 1- Social disciplines-4 credits																	
BD01	IFS 5201	History and philosophy of science	2	3	1			90	30	15	15	15	45,0	1/1			
BD 02	FL 5202	Foreign Language	2	3	1			90	30		30	15	45,0	0/2			
Module 2- Pedagogical disciplines -4 credits																	
BD 03	Ped 5203	Pedagogic	2	3	2			90	30	15	15	15	45,0		1/1		
BD 04	Psy 5204	Psychology	2	3	1			90	30	15	15	15	45,0	1/1			
CS 1	Component selection		12	20				540	180	60	120	60	300	3	9	0	0
Module 3-Agriculture -3 credits																	
CS 01	LEL 5205	Land and environmental legislation	3	5	2			135	45	15	30	15	75		1/2		
Module 4 – Microbiology -3 credits																	
CS 02	SM 5206	Soil's microbiology	3	5	2			135	45	15	30	15	75,0		1/2		
Module 5- Ecological soil science -3 credits																	
CS 03	GeoB 5207	Geobotany	3	5	1			135	45	15	30	15	75,0	1/2			
Module 6- Ecology of fertilizers - 3 credits																	
S 04	EAFA 5208	Ecological aspects of fertilizers application	3	5	2			135	45	15	30	15	75		1/2		

Cycle / Component	discipline code	Name of discipline	RK credits / ECTS	Semester	Control on Semesters			Quantity of hours						Distribution on the courses and semesters					
					exams	tests	Report on practice	Total	classroom	including		SSMT	SSM	1 course		2 course			
										lecture	practical			1 sem	2 sem	3 sem	4 sem		
					weeks in semester														
					15	15	15	15	15	lecture	practical			15	15	15	15		
PD-1	Profiling disciplines, total			22	35			990	330	135	195	120	540	6	6	10	0		
MC2.1	Mandatory component			2	3			90	30	15	15	15	45	2	0	0	0		
Module 7 - Physics and chemistry of soils -2 credits																			
MC 2.1	PCS 5301	Physics and chemistry of soils	2	3	1			90	30	15	15	15	45	1/1					
	Component selection			20	32			900	300	120	180	105	495	4	6	10	0		
Module 8-Plant nutrition -3 credits																			
CS 01	SPD 5302	Soil and plant diagnostics	3	5	2			135	45	15	30	15	75		1/2				
Module 9- Soil fertility -3 credits																			
CS02	GCS 5303	Genesis and classification of soil	3	5	2			135	45	15	30	15	75		1/2				
Module 10- Method of soil-agrochemical researches -3 credits																			
CS 03	MAR 6304	Method of agrochemical researches	3	5	3			135	45	15	30	15	75			1/2			
Module 11-Plant nutrition and fertilizers -3 credits																			
CS 04	SOMN 6305	System of optimization of mineral nutrition	3	5	3			135	45	15	30	15	75			1/2			
Module 12- crop rotation and fertilizers -4 credits																			
CS 05	SFCCR 6306	System of fertilizer of culture in crop rotation	4	6	3			180	60	30	30	15	105			2/2			

Cycle / Component	discipline code	Name of discipline	RK credits / ECTS	Semester	Control on Semesters			Quantity of hours					Distribution on the courses and semesters						
					exams	tests	Report on practice	Total	classroom	including		SSMT	SSM	1 course		2 course			
										lecture	practical			1 sem	2 sem	3 sem	4 sem		
														weeks in semester					
Module 13- degradation of lands -2 credits																			
CS 06	DRDLZ5307	Desertification and rehabili-tating degraded lands	2	3	1			90	30	15	15	15	45	1/1					
Module 14 - Biological plant protection - 2 credits																			
CS 07	BMPP 5308	Biological methods of plant protection	2	3	1			90	30	15	15	15	45	1/1					
Total theoretical study			42	68				1890	630	240	390	240	1020	15	17	10	0		
Research work of a student, including the implementa-tion of the master's thesis			7					840	105				735				2		
comprehensive exam			1					105	15		0	0	90				1		
Writing and defence of master's thesis			3					315	45				270				3		
Educational Practices			3					90	45				45						
Research Practice			3					360	45				315						
TOTAL			59	68	0			3600	885	270	360	225	2490	15	17	10	6		

Work study plane of PhD programme on specialty 6D080800 Soil science and Agrochemistry 2013-2016 years

Cycle / Component	discipline code	Name of discipline	RK credits / ECTS	Semester	Control on Semesters		Quantity of hours					Distribution on the courses and semesters							
					exams	Report on practice	Total	classroom	including		SSMT	SSM	1 course		2 course		3 course		
									lecture	practical			1 sem	2 sem	3 sem	4 sem	5 sem	6 sem	
BDK-1	Base disciplines, total		18	30			810	270	90	180	90	450	18	0	0	0	0	0	
MC 1.1	Mandatory component		3	5			135	45	15	30	15	75	3	0	0	0	0	0	
Module 1- Soil fertility -3 credits																			
BD 01	TBWRF 7201	Theoretical bases and ways of regulating fertility	3	5	1		135	45	15	30	15	75							
CS	Component selection		15	25			675	225	75	150	75	375	15						
Module 2 – Microbiology - 3 credits																			
CS 01	SB 7202	Soil's biota	3	5	1		135	45	15	30	15	75	1/2						
Module 3- Methods of researches -3 credits																			
CS 02	MMSAR 7203	Modern methods of soil and agrochemical research	3	5	1		135	45	15	30	15	75	1/2						
Module 4 - management -3 credits																			
CS 03	IM 7204	Innovation management	3	5	2		135	45	15	30	15	75		1/2					
Module 5- Modern farming systems -3 credits																			
CS 04	ASA 7205	Alternative systems of agriculture	3	5	1		135	45	15	30	15	75	1/2						
Module 6- Educational activity of teacher - 3 credits																			
CS 05	PP 7206	Professional Pedagogy	3	5	1		135	45	15	30	15	75	1/2						
PD-1	Profiling disciplines, total		18	30			810	270	90	180	90	450	0	18	0	0	0	0	
	Component selection		18	30			810	270	90	180	90	450	0	18	0	0	0	0	

<i>Module 7-Agrochemistry of fertilizers -3 credits</i>																		
CS01	ANPPF 8307	Agrochemistry of nitrogen, phosphate and potash fertilizers	3	5	2		135	45	15	30	15	75		1/2				
<i>Module 8- Ecology of Agrochemistry and soil science -3 credits</i>																		
CS02	EFSA 8308	Ecological Functions of Soil Science and Agricultural Chemistry	3	5	2		135	45	15	30	15	75		1/2				
<i>Module 9- Fertilizers and production process -3 credits</i>																		
CS03	MPPAC 8309	Manage production process with agricultural crop	3	5	1		135	45	15	30	15	75	1/2					
<i>Module 10- Methods of microbiological researches -3 credits</i>																		
CS04	RMSM 8310	Research methods of soil microbocenosis	3	5	2		135	45	15	30	15	75		1/2				
<i>Module 11- Soil Bioremediation and Bioindication -3 credits</i>																		
CS05	SBB 8311	Soil Bioremediation and Bioindication	3	5	2		135	45	15	30	15	75		1/2				
<i>Module 13- plant nutrition -3 credits</i>																		
CS06	SBPNFA 8312	Scientific basis of plant nutrition and fertilizer application	3	5	2		135	45	15	30	15	75		1/2				
Total theoretical study			36				1620	540	180	360	180	900	18	18	0	0	0	
Research Practice			3		2,4	*	360	45				315		2	*	1	*	
Educational Practices			3		3		90	45				45			3			
Research work of a student, including the implementation of the doctor's thesis			28		3,4,5,6	*	3360	285				3075			7	10	8	3
Complex exam			1		6		105	15		0	0	90					1	
Writing and defence of doctor's thesis			4		6		420	60				360					4	
TOTAL			75				5955	990	180	360	180	4785	18	20	10	11	8	8