

Study programme: Crop production - 4 YEAR STUDY PROGRAMME
DIPLOMA: Graduated agricultural engineer – Farmer, Baccalaureat (NQF VI A)

CODE	VII SEMESTER – FOURTH YEAR			
	Compulsory courses	Credits	Classes	Total
2ZF112312	Basics of field crop production	8	3+2+2	216
2ZF112412	Plant breeding and seed production in field crops	8	3+2+2	216
2ZF112512	Oleiferous plants	6	2+2+1	156
	<i>Faculty elective course</i>	4	2+1+1	120
	<i>Faculty elective course</i>	4	2+1+1	120
Total:		30	12+8+7	828

CODE	VIII SEMESTER – FOURTH YEAR			
	Compulsory courses	Credits	Classes	Total
2ZF107012	Leguminous plants	6	2+2+1	156
2ZF106212	Farm crop protection	6	2+2+1	156
	<i>University elective course</i>	6	2+2+1	156
	<i>Faculty elective course</i>	4	2+1+1	120
	Graduation thesis	8	0+0+8	192
Total:		30	8+7+12	780

CODE	<i>Faculty elective course VIII semester</i>			
2ZF112712	Aromatic and honey plants	4	2+1+1	120
2ZF120512	The processing of field crops products	4	2+1+1	120
2ZF112812	Crop organization	4	2+1+1	120
2ZF112912	Practics at Field crop production	4	2+1+1	120
	<i>Faculty elective course VIII semester</i>			
2MF103712	Quality Management	4	2+1+1	120
2ZF106012	Farm Management	4	2+1+1	120

Code	<i>University elective courses VII semester and VIII semester</i>			
UGD102212	Fundamentals of Tourism	6	2+2+1	156
UGD102312	Earth Sciences	6	2+2+1	156
UGD102412	Physics	6	2+2+1	156
UGD102512	Biology	6	2+2+1	156
UGD102612	Health care	6	2+2+1	156
UGD102012	History of Art	6	2+2+1	156
UGD102112	National history	6	2+2+1	156

Appendix No.3		Subject programme from first cycle studies			
1.	Course title	BASICS OF FIELD CROP PRODUCTION			
2.	Course code	2ZF112312			
3.	Study programme:	Field crop production, four year study programme			
4.	Organizers of the study programme (faculty, institute, group)	Faculty of Agriculture Department of Plant Production			
5.	Level of study (first, second, third cycle)	First cycle			
6.	Academic year / semester	First / first	7.	Number of ECTS credits	8
8.	Professor	Prof. Ljupco Mihajlov PhD			
9.	Preconditions for course enrollment	/			
10.	<p>Goals of the course programme: Introduction and study of the basic conditions for successful cultivation of plants and measurements necessary for creation of favorable conditions for optimal growth and development of plants. For this purpose arable farming includes soil cultivation and processing systems of soil, crop rotation, fertilization, seed, sowing and planting, weeds and weed suppression. The purpose of practical teaching in this course is understanding of arable farming through personal observation and work with appropriate material according to the planned programme. The aim of the practical training is explanation and discussion of broad practical and research issues. Within the classes provided for practical instruction students are going to be introduced with the basic methods and techniques of soil cultivation, fertilization and sowing in the field.</p>				
11.	<p>Content of the course programme:</p> <p>A) Content of the theoretical course programme: 1. Historical stages of soil processing and subject of study of general cropping; 2. Basic and additional soil processing; 3. Soil processing systems; 4. Fertilization of soil and division of fertilizers; 5. Sowing and planting; 6. Crop rotation; 7. Weeds; 8. Mechanical and biological measures for weed suppression; 9. Chemical measures for weed suppression; 10. Division of herbicides; 11. Ways for weed suppression in organic crop production; 12. The use of herbicides in certain cultural plants-</p> <p>B) Content of exercises (practical and laboratory) course programme:</p> <p>1. Parameters for assessing the appropriate time and appropriate quality of soil cultivation; 2. Evaluate the quality of the special working soil processing operations; 3. Parameters for assessing the implementation of appropriate systems of processing diverse soils in different areas; 4. Modes for regulation of certain coupled tools for soil processing; 5. Calculation of needs and determination of needs for plant fertilization in certain crops; 6. Calculating the norms of seed for sowing in certain crops; 7. Planning, preparation and introduction of crop rotation; 8. Compilation of herbarium atlas of weed tissue and their determination; 9. Determination of the proper dose of herbicides and fluid consumption per unit of area for different crops; 9. Analysis of parameters for presence and control of weeds; 10. Major types of weeds and their main characteristics 11. Conditions and ways for application of herbicides; 12. Field exercise;</p>				
12.	Methods of study:				

	Lectures, theoretical and laboratory exercises; consultations; individual project work; individual learning; preparation lectures for exams and mid-term exams: consultations.					
13.	Total amount of available time		216 hours			
14.	Distribution of the available time		3+2+2			
15.	Forms of teaching activities	15.1.	Lectures - theoretical training	3 hours/week		
		15.2.	Practice (laboratory, auditory), workshops, outreach and teamwork	2 hour/week		
16.	Other forms of activities	16.1.	Team projects	-		
		16.2.	Individual projects	1 hour/week		
		16.3.	Individual study	1 hour/week		
17.	Forms of assessment					
	17.1.	Exams (mid-term exams, exam, electronic testing)			70	
	17.2.	Project activities (oral and written presentation)			10	
	17.3.	Other forms of studying activities			20	
18.	Criteria for assessment (points / grade)		to 50 points	5 (five) (F)		
			from 51 to 60 points	6 (six) (E)		
			from 61 to 70 points	7 (seven) (D)		
			from 71 to 80 points	8 (eight) (C)		
			from 81 to 90 points	9 (nine) (B)		
			from 91 to 100 points	10 (ten) (A)		
19.	Condition for getting a signature and taking the final exam		/ 60% of term activities or minimum 42 points from 2 mid-term exams, project activities and attending to lectures and discussions			
20.	Language in which classes are conducted		Macedonian			
21.	Method of monitoring the quality of instruction		Self-evaluation, Periodic test for students; Survey			
22.	Literature					
	22.1.	Compulsory literature				
		Ordinal number	Author	Title	Publisher	Year
		1.	Ljupco Mihajlov Fidanka Trajkova	Farm cropping – University textbook	UGD- Stip	2011
		2.	Kostov, T. Faculty of Agriculture – Skopje, 1994.	Basics of farm cropping and agroecology (manual).	University „St. Cyril and Methodius“, Skopje	1994.
	22.2.	Additional literature				
Ordinal number		Author	Title	Publisher	Year	

		1.	Molinar, I., Miloshev, D., Kurjacki, I.	Manual of basic farm cropping	Faculty of Agriculture, Novi Sad,	2003
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Appendix No.3		Syllabus for the first, second and third cycle of study				
1.	Course title	PLANT BREEDING AND SEED PRODUCTION IN FIELD CROPS				
2.	Course code	2ZF112412				
3.	Study programme	Arable crops, four year study				
4.	Organizers of the study programme (faculty, institute, group)	University "Goce Delčev"- Štip, Faculty of Agriculture, Department of Plant Production				
5.	Level of study (first, second, third cycle)	First cycle				
6.	Academic year / semester	Fourth year / seventh semester	7.	Number of ECTS credits	8	
8.	Professor	Prof. Verica Ilieva PhD				
9.	Preconditions for course enrollment	/				
10.	Goals of the course programme:	The aim of this course is successful application of acquired general knowledge from genetics and plant breeding in the selection for creating new varieties and improving and maintaining existing varieties of certain agriculture crops.				
11.	Content of the course programme:	<p>A) Content of lecture: Breeding of wheat, barley, oats, rye, rice, corn, soybean, sunflower, poppy, alfalfa (Importance, Origin, Taxonomy and Pollination; initial material for selection and usage, methods for plant breeding, methods for plant breeding and testing previously selected material, selection to improve certain properties, seed production).</p> <p>B) Content of exercises: Breeding of wheat, barley, oats, rye, rice, corn, soybean, sunflower, poppy, alfalfa (Laboratory methods for assessment of selected material, trial fields methods for evaluation of selected material).</p>				
12.	Method of study:	lectures, theoretical and practical exercises, consultations; individual and team projects; e-learning; prepare lecture for exams.				
13.	Total amount of available time	216				
14.	Distribution of available time	3+2+2				
15.	Form of teaching activities	15.1.	Lecture – theoretical training		3	

		15.2.	Practice (laboratory, auditory), workshops, outreach and teamwork	2
16.	Other form of activities	16.1.	Team projects	1
		16.2.	Individual projects	1
		16.3.	Individual study	/
17.	Models of grading			
	17.1.	Exams		70
	17.2.	Project activities (oral and written presentation)		10
	17.3.	Other forms of studying and activities		20
18.	Criteria for assessment (point/grade)		to 50 points	5 (five) (F)
			from 51 to 60 points	6 (six) (E)
			from 61 to 70 points	7 (seven) (D)
			from 71 to 80 points	8 (eight) (C)
			from 81 to 90 points	9 (nine) (B)
			from 91 to 100 points	10 (ten) (A)
19.	Condition for getting a signature and taking the final exam	60% of term activities or minimum 42 points from 2 mid-term exams, project activities and attending to lectures and exercises		
20.	Language in which classes are conducted	Macedonian		
21.	Method of monitoring the quality of instruction	Self- evaluation		

22.	Literature				
22.1.	Compulsory literature				
	Ordinal number	Author	Title	Publisher	Year
	1.	Verica Ilieva	Plant breeding and seed production - (no reviewed script)	University "Goce Delčev"- Štip, Faculty of Agriculture	2012
	2.	Cvetanka Najcevska	Plant breeding and seed production - (practicum)	University "Ss. Cyril and Methodius, Skopje, Faculty of agriculture science and food	1997
	3.	Madenovski, T.	Certification of seeds of plants intended for	Bigoss, Skopje	2007

				production plant fiber, oil and sugar		
	4.	Mladenovski, T.		Production of seeds of plants intended for feeding livestock	Alfa 94, Skopje	2006
22.2.	Additional literature					
	Ordinal number	Author		Title	Publisher	Year
	1.	Martinčić, J., Kozumplik, V.		Plant Breeding	Faculty of agriculture, Zagreb	1996
	2	Marić, M. Miodrag		Seedling	Publisher DRAGANIC, Belgrade	2005

Appendix No.3		Subject programme from first cycle studies				
1.	Course title	OLEIFEROUS PLANTS				
2.	Course code	2ZF112512				
3.	Study programme:	Field crop production, four year study programme				
4.	Organizers of the study programme (faculty, institute, group)	Faculty of Agriculture Department of Plant Production				
5.	Level of study (first, second, third cycle)	First cycle				
6.	Academic year / semester	First / seventh semester	7.	Number of ECTS credits	6	
8.	Professor	Prof. Ljupco Mihajlov PhD				
9.	Preconditions for course enrollment	/				
10.	Goals of the course programme: Introduction to the group of oleiferous plants. Students are introduced to the technologies for cultivation and manufacturing of oleiferous plants. Studying the groups of oleiferous plants, their taxonomic affiliation and introduction with their commercial importance, dissemination, physiology, genetics, selection, soil management and protection. The course provides a brief overview of the ways of harvesting - collecting and storing of oleiferous plants.					
11.	Content of the course programme: C) Content of the theoretical course programme: 1. Place, importance and role of the oleiferous plants. 2. Separation and distribution of the oleiferous plants. 3. Anatomical morphological and biological characteristics of oleiferous plants. 4. Environmental conditions for production. 5. Botanical classification of major oleiferous plants. 6. Selection and genetics of oleiferous plants. 7. Tehnologies for					

	<p>oleiferous plant manufacturing. 8. Seed production of separate species of oleiferous plant. 9. Fertilization of certain oleiferous plant species. 10. Abiotic factors in the production of oleiferous plants. 10. Collecting - Harvesting of oleiferous plants 11. Warehousing and storage of grain oleiferous plants. 12. Organic production of oleiferous plants.</p> <p>D) Content of exercises (practical and laboratory) course programme:</p> <p>1. Regionalization of oleiferous plants. 2. Microscopic observation of the cross section of sheets from different oleiferous plants. 3. Introduction to the morphological, biological and quality characteristics of the most important species of oleiferous plants. 4. Systematics of economically important species of oleiferous plants. 5. Macroscopic and microscopic interpretation of certain oleiferous plants. 6. Qualitative and quantitative assessment of plant parts - raw materials from oleiferous plants. 7. Kinds of reproductive material in oleiferous plants. 8. Characterization and identification of plant material from oleiferous plants for reproduction. 9. Determination of the quality properties of reproduction plant material from oleiferous plants. 10. Calculation of seed norms for different type of oleiferous plants. 11. Elements and methods for estimation of yield and calculation of harvest index at oleiferous plants. 12. Field exercise.</p>			
12.	<p>Methods of study: Lectures, theoretical and laboratory exercises; consultations; individual project work; individual learning; preparate lectures for exams and mid-term exams: consultations.</p>			
13.	Total amount of available time	156 hours		
14.	Distribution of the available time	2+2+1		
15.	Forms of teaching activities	15.1.	Lectures - theoretical training	2 hours/week
		15.2.	Practice (laboratory, auditory), workshops, outreach and teamwork	2 hour/week
16.	Other forms of activities	16.1.	Team projects	-
		16.2.	Individual projects	0,5 hour/week
		16.3.	Individual study	0,5 hour/week
17.	Forms of assessment			
	17.1.	Exams (mid-term exams, exam, electronic testing)		70
	17.2.	Project activities (oral and written presentation)		10
	17.3.	Other forms of studying activities		20
18.	Criteria for assessment (points / grade)	to 50 points		5 (five) (F)
		from 51 to 60 points		6 (six) (E)
		from 61 to 70 points		7 (seven) (D)
		from 71 to 80 points		8 (eight) (C)
		from 81 to 90 points		9 (nine) (B)
		from 91 to 100 points		10 (ten) (A)
19.	Condition for getting a signature and taking the final exam	60% of term activities or minimum 42 points from 2 mid-term exams, project activities and attending to lectures and discussions		
20.	Language in which classes are conducted	Macedonian		

21.	Method of monitoring the quality of instruction	Self-evaluation, Periodic test for students; Survey			
22.	Literature				
	Compulsory literature				
	Ordinal number	Author	Title	Publisher	Year
22.1.	1.	Gjorgievski J.	Industrial crops	University textbook, UKIM -Skopje	1975
	2.	Egumenovski P.	„Special Field crop production“	Culture, Skopje	1989
	Additional literature				
	Ordinal number	Author	Title	Publisher	Year
22.2.	1.	Vratarik M. at al.	Sunflower, (monography),	Institute of Agriculture, Osijek	2004

Appendix No.3		Syllabus for the first, second and third cycle of study			
1.	Course title	Leguminous plants			
2.	Course code	2ZF106512			
3.	Study programme:	Crop direction, four-year study			
4.	Organizers of the study programme (faculty, institute, group)	Faculty of Agriculture, Department of Crop Production			
5.	Level of study (first, second, third cycle)	First cycle			
6.	Academic year / semester	fourth year / eighth semester	7.	Number of ECTS credits	6
8.	Professor	Ass.prof. Mite Ilievski PhD			
9.	Preconditions for course enrollment	No			
10.	Goals of the course programme: Introduction of leguminous crops and the acquisition of relevant knowledge about the morphological, biological, economic and production characteristics of the plants, the application of appropriate agro-technical measures for their proper growth and achievement of high quality yields.				
11.	Content of the course programme: A) 1. Introduction, definition, an overview of the areas in the world under leguminous plants; 2. Representatives, economic importance, common morphological properties; 3.				

	Natural conditions of production; 4. Beans; 5. Soybean; 6. Lens; 7. Chickpeas; 8. Buckley; 9. Lupine; 10. Peas; 11. Peanuts; 12. Ax. B) Content of exercises: 1. General agro-technical measures for production; 2. Anatomical structure of grain; 3. Biological properties of leguminous plants; 4. Morphological features and varieties of beans; 5. Morphological features and quality of soybean varieties; 6. Morphological characteristics and quality of lens varieties; 7. Morphological characteristics and quality of chickpeas varieties; 8. Morphological characteristics and quality of lens varieties; 9. Morphological characteristics and quality of beans and lupine varieties; 10. Morphological characteristics and quality of peanuts and ax varieties; 11. Field exercises; 12. Field exercises.			
12.	Methods of study: lectures, theoretical and practical exercises, individual projects; learning home; mid-term exams, consultations.			
13.	Total amount of available time	156 hours		
14.	Distribution of the available time	2 +2 +1		
15.	Forms of teaching activities	15.1.	Lectures - theoretical training	2
		15.2.	Practice (laboratory, auditory), workshops, outreach and teamwork	2
16.	Other forms of activities	16.1.	Team projects	/
		16.2.	Individual projects	0,5
		16.3.	Individual study	0,5
17.	Forms of assessment			
	17.1.	Exams (mid-term exams, exam, electronic testing)		70
	17.2.	Project activities (oral and written presentation)		10
	17.3.	Other forms of studying activities		20
18.	Criteria for assessment (points / grade)		to 50 points	5(five) (F)
			from 51 to 60 points	6(six) (E)
			from 61 to 70 points	7(seven) (D)
			from 71 to 80 points	8(eight) (C)
			from 81 to 90 points	9(nine) (B)
			from 91 to 100 points	10(ten) (A)
19.	Condition for getting a signature and taking the final exam	60% of term activities or minimum 42 points from 2 mid-term exams, project activities and attending to lectures and discussions		
20.	Language in which classes are conducted	Macedonian language		
21.	Method of monitoring the quality of instruction	Self-evaluation, periodic tests for students, Survey.		
22.	Literature			
	22.1.	Compulsory literature		

		Ordinal number	Author	Title	Publisher	Year
		1.	G. Vasilevski	Grain and tuber culture	Expresive graphics-Skopje	2004
		2.	M. Ilievski	Leguminous plants-authorized lectures in pdf format for students of the Faculty of Agriculture, UGD-Stip	University Goce Delcev-Stip	2012
		3.	M. Ilievski	Leguminous plants-authorized exercises in pdf format for students of the Faculty of Agriculture, UGD-Stip	University Goce Delcev-Stip	2012
		Additional literature				
		Ordinal number	Author	Title	Publisher	Year
	22.2.	1.	State statistical office on Republic of Macedonia	Field crops, orchards and vineyards, 2012	State statistical office–Skopje, Dame Gruev-4	2012
		2.	P. Egumenovski D. Bocevski P. Mitkovski	Special field production	Library, books, Skopje	2003
		3.	Stevan Jevtič	Special field production	IP Nauka-Beograd	1992

Appendix No.3		Syllabus for the first, second and third cycle of study			
1.	Course title	Farm crop protection			
2.	Course code	ZZF100712			
3.	Study programme:	Farm crop production - Four years studies			
4.	Organizers of the study programme (faculty, institute, group)	Department for plant and environmental protection Faculty of Agriculture University “Goce Delcev”- Stip.			
5.	Level of study (first, second, third cycle)	First cycle			
6.	Academic year / semester	Fourth year/ eighth semester	7.	Number of ECTS credits	6
8.	Professor	Prof. Ilija Karov, PhD, Prof. Dusan Spasov, PhD			
9.	Preconditions for course enrollment	No			

10.	Goals of the course programme: Students are introduced to the major diseases at field crops from biotic and abiotic stress, symptoms, pathogens and implementation of measurements for protection.			
11.	Content of the course programme: I. Lectures: 1.Introduction, meaning protection in crop production; 2.Classification of protection measurements: agro-technical and administrative method; 3. Biological, physical and mechanical protection method; 4. Chemical method and integral method for plant protection; 5. Field crop protection measures of the most important diseases caused by pathogenic microorganisms; 6. Field crop protection measures of the most important pests and nematodes; 7. Field crop protection measures of the most important weeds; 8. Measures for protection of grain legume crops of the most important diseases caused by pathogenic microorganisms; 9. Measures for protection of grain legume crops of the most important pests and nematodes; 10. Measures for protection of grain legume crops of the most important weeds; 11. Measures for protection of root tuber cultures of the most important diseases caused by pathogenic microorganisms; 12. Measures for protection of root tuber cultures from the most important pests and weeds. II. Practices: 1. Selection of products for protection of field crops; 2. Seed tretment; 3. Application of protection products; 4. Assessment of the severity of the disease; 5. Prediction of diseases and pests; 6. Existing models to protect cereals from some significant diseases; 7. Crop protection programme from diseases, pests and weeds; 8. Programme for the protection of grain legume crops from diseases, pests and weeds; 9.Programme for rotection of root tuber crops from diseases, pests and weeds; 10. Measures for protection of forage crop from the most important diseases, pests and weeds; 11. Measures for protection of fiber and oil crops from the most important diseases, pests and weeds; 12. Plant protection measures for technical processing crops: hop and tobacco from the most important diseases, pests and weeds.			
12.	Methods of study: Lectures, theoretical and practice exercises, consultations; individual work; home learning; preparatory classes for exams and mid-term tests: consultation;			
13.	Total amount of available time	156 hours		
14.	Distribution of the available time	2+2+1		
15.	Forms of teaching activities	15.1.	Lectures - theoretical training	2
		15.2.	Practice (laboratory, auditory), workshops, outreach and teamwork	2
16.	Other forms of activities	16.1.	Team projects	
		16.2.	Individual projects	0,5
		16.3.	Individual study	0,5
17.	Forms of assessment			
	17.1.	Exams (mid-term exams, exam, electronic testing)		70
	17.2.	Project activities (oral and written presentation)		10
	17.3.	Other forms of studying activities		20
18.		to 50 points	5 (five)	(F)

	Criteria for assessment (points / grade)	from 51 to 60 points	6 (six) (E)		
		from 61 to 70 points	7 (seven) (D)		
		from 71 to 80 points	8 (eight) (C)		
		from 81 to 90 points	9 (nine) (B)		
		from 91 to 100 points	10 (ten) (A)		
19.	Condition for getting a signature and taking the final exam	60% of term activities or minimum 42 points from 2 mid-term exams, project activities and attending to lectures and discussions			
20.	Language in which classes are conducted	Macedonian			
21.	Method of monitoring the quality of instruction	Self-evaluation			
22	Literature				
	Compulsory literature				
	Ordinal number	Author	Title	Publisher	Year
22.1.	1.	Prof. d-r. Filip Pejcinovski and Prof. D-r. Sasa Mitrev	Agriculture Phytopathology (basic part)	UGD-Stip	2007
	2.	Prof. d-r. Filip Pejcinovski and Prof. D-r. Sasa Mitrev	Agriculture Phytopathology (special part)	UGD-Stip	2007
	Additional literature				
	Ordinal number	Author	Title	Publisher	Year
22.2.	1.	Milan Miceljski, Bogdan Cvjetkovic, Jasminka I. Barcic, Zvonimir Ostojic	Manual for plant protection	Tiskara MD, Zagreb	1997
	2.	Milan Maceljiski, Josip Kišpatić, Zvonko Ostojčić	Farm crop protection from pests, diseases and weeds	Zagreb Nigro "Zadružna štampa"	1984

Appendix No.3		Syllabus for the first, second and third cycle of study
1.	Course title	AROMATIC AND HONEY PLANTS

2.	Course code	2ZF112712		
3.	Study programme	Arable crops, four year study		
4.	Organizers of the study programme (faculty, institute, group)	University "Goce Delčev" - Štip, Faculty of Agriculture, Department of Plant Production		
5.	Level of study (first, second, third cycle)	First cycle		
6.	Academic year / semester	Fourth year/seventh semester	7. Number of ECTS credits	4
8.	Professor	Prof. Verica Ilieva PhD		
9.	Preconditions for course enrollment	/		
10.	Goals of the course programme:	Get acquainted with the group of aromatic, honey and pollen plants. Introducing students to the technologies of cultivated production of aromatic, honey and pollen plants. Studying groups, their taxonomy, significance, wide-spread, physiology, genetics, soil management and protection of aromatic, honey and pollen plants. Introducing to the harvest, post-harvest procedure and storing.		
11.	Content of the course programme:	<p>A) Content of lecture:</p> <p>1. Role and significance of aromatic, honey and pollen plants; 2. Types and wide-spread of aromatic, honey and pollen plants; 3. Anatomy, morphological and biological characteristics of most important aromatic, honey and pollen plants; 4. Ecological conditions for production of aromatic, honey and pollen plants; 5. Botanical classification of most important aromatic, honey and pollen plants; 6. Selection and genetics of aromatic, honey and pollen plants; 7. Growing technologies for production of aromatic, honey and pollen plants; 8. Seed production of certain aromatic, honey and pollen plants; 9. Fertilization of certain types of aromatic, honey and pollen plants; 10. Abiotic factors in production of aromatic, honey and pollen plants; 10. Harvesting of aromatic, honey and pollen plants; 11. Storing and keeping of aromatic, honey and pollen plants; 12. Organic farming of aromatic, honey and pollen plants;</p> <p>B) Content of exercises:</p> <p>1. Wide-spread of indigenous and cultivated of aromatic, honey and pollen plants; 2. Longitudinal and cross-sectional microscopic leaf observance of different aromatic, honey and pollen plants; 3. Introduction to morphological biological and qualitative characteristics of most important varieties of aromatic, honey and pollen plants; 4. Botanical and taxonomical distribution of most important aromatic, honey and pollen plants; 5. Macroscopic and microscopic interpretation of certain aromatic, honey and pollen plants; 6. Qualitative and quantitative evaluation of plant parts – raw material of aromatic, honey and pollen plants; 7. Types of reproductive material at aromatic, honey and pollen plants; 8. Drying procedures of aromatic, honey and pollen plants; 9. Extraction procedures of essential oils of aromatic, honey and pollen plants; 10. Calculation of seed quantities or number of plantlets of aromatic, honey and pollen plants; 11. Elements and estimation of yields of aromatic, honey and pollen plants; 12. Field trip.</p>		

12.	Method of study: interactive lectures, theoretical and practical exercises, consultations; case studies; research and presentations; consultations; internship in public & private institutions NGO's and donors			
13.	Total amount of available time		120	
14.	Distribution of available time		2+1+1	
15.	Form of teaching activities	15.1	Lecture – theoretical training	2
		15.2	Practice (laboratory, auditory), workshops, outreach and teamwork	1
16.	Other form of activities	16.1	Team projects	/
		16.2	Individual projects	0.5
		16.3	Individual study	0.5
17.	Forms of assessment			
	17.1.	Exams		70
	17.2.	Project activities (oral and written presentation)		10
	17.3.	Other forms of studying and activities		20
18.	Criteria for assessment (points/grade)		to 50 points	5 (five) (F)
			from 51 to 60 points	6 (six) (E)
			from 61 to 70 points	7 (seven) (D)
			from 71 to 80 points	8 (eight) (C)
			from 81 to 90 points	9 (nine) (B)
			from 91 to 100 points	10 (ten) (A)
19.	Condition for getting a signature and taking the final exam	60% of term activities or minimum 42 points from 2 mid-term exams, project activities and attending to lectures and exercises		
20.	Language in which classes are conducted	Macedonian		
21.	Method of monitoring the quality of instruction	Self- evaluation		

22.	Literature				
22.1.	Compulsory literature				
	Ordinal number	Author	Title	Publisher	Year
	1.	Ljupcho Mihajlov	Aromatic, honey and pollen plants – Intern script – lectures for students of Faculty of Agriculture	GDU Shtip	2012
	2.	Ljupcho Mihajlov	Aromatic, honey and pollen plants – Intern script – exercises for	GDU Shtip	2012

				students of Faculty of Agriculture		
		3.	Kire Stojchevski	„Prirucnik za gajenje lekovitog i aromaticnog bilja”	Udruzenje za lekovito bilje DR. JOVAN TUCAKOV - Sokobanja	2011
22.2.	Additional literature					
		Ordinal number	Author	Title	Publisher	Year
		1.	Group of authors	Monograph: Nane (1997), Kamilica (1998) и Zalfija (1999).	Institut za proučavanje lekovitog bilja, Beograd;	1997, 1998 и 1999
		2	Egumenovski, P. et. al	„Specijalno poljodjelstvo“	Kultura, Skopje	1989
		3.	Jevtic, S.	„Posebno ratarstvo”	Nauka, Beograd	1992

Appendix No.3		Syllabus for the first, second and third cycle of study				
1.	Course title	The processing of field crops products				
2.	Course code	2ZF120512				
3.	Study programme:	The processing of animal products, four year study				
4.	Organizers of the study programme (faculty, institute, group)	Faculty of Agriculture, Department of Food Technology and processing of animal products				
5.	Level of study (first, second, third cycle)	First cycle				
6.	Academic year / semester	Fourth year / seventh semester	7.	Number of ECTS credits	4	
8.	Professor	Ass.prof. Mite Ilievski PhD				
9.	Preconditions for course enrollment	No				
10.	Goals of the course programme: Getting basic knowledge in the field of processing the crops with getting a clear picture of the technological procedures in their processing, most certainly, the warehousing and processing is keeping them from the moment of processing.					
11.	Content of the course programme: A) Content of lectures: 1. Introduction; 2. Warehousing and storage crops products from harvesting to processing; 3. Facilities, Equipment and receipt of grain in warehouses; 4.					

	<p>Changes in grain storage, storage of corn, potato and sugar beet protection against storage pests and fires; 5. Flour productions; 6. Production of bread, dried and frozen pastry and other baked products; 7. Production of vegetable oils; 8. Production of plant oils; 9. Sugar production; 10. Production of starch; 11. Production of malt; 12. Production of beer.</p> <p>B) Content of exercises: 1. Composition of silos system and management processes in silos; 2. Fire protection of silos; 3. Grinding of rye, corn and soybeans; 4. Production of paraboiled rice; 5. Raw materials for the production of bread, cheese crackers and decorative pastries; 6. Raw materials for the production of oil and oil handling and storage; 7. Raw sugar production and sugar handling and storage; 8. Raw materials for the production of starch; 9. Raw materials for the production and finishing of dry malt; 10. Raw materials for the production of beer and alcoholic fermentation; 11. Field exercises; 12. Field exercises.</p>			
12.	Methods of study: lectures, theoretical and practical exercises, individual projects; learning home; mid-term exams, consultations.			
13.	Total amount of available time	120 hours		
14.	Distribution of the available time	2 +1 +1		
15.	Forms of teaching activities	15.1.	Lectures - theoretical training	2
		15.2.	Practice (laboratory, auditory), workshops, outreach and teamwork	1
16.	Other forms of activities	16.1.	Team projects	1
		16.2.	Individual projects	/
		16.3.	Individual study	/
17.	Forms of assessment			
	17.1.	Exams (mid-term exams, exam, electronic testing)		70
	17.2.	Project activities (oral and written presentation)		10
	17.3.	Other forms of studying activities		20
18.	Criteria for assessment (points / grade)	to 50 points		5(five) (F)
		from 51 to 60 points		6(six) (E)
		from 61 to 70 points		7(seven) (D)
		from 71 to 80 points		8(eight) (C)
		from 81 to 90 points		9(nine) (B)
		from 91 to 100 points		10(ten) (A)
19.	Condition for getting a signature and taking the final exam	60% of term activities or minimum 42 points from 2 mid-term exams, project activities and attending to lectures and discussions		
20.	Language in which classes are conducted	Macedonian language		
21.	Method of monitoring the quality of instruction	Self-evaluation, periodic tests for students, Survey.		
22.	Literature			

	22.1.	Compulsory literature				
		Ordinal number	Author	Title	Publisher	Year
		1.	G. Vasilevski	Processing of crops products	Agricultural faculty-Skopje	1999
		2.	M. Ljubisavljevic	Grain products, description, volume of production, chemical composition, quality, health safety, transport, legislation	Velarta-Belgrade	1999
	3.	G. Vasilevski	Rice production and processing	Debate Macedonian, Library Astronautics-Skopje	1997	
	22.2.	Additional literature				
		Ordinal number	Author	Title	Publisher	Year
		1.	Ministry of Agriculture on R. of Macedonia	National list of varieties of the Republic of Macedonia	Ministry of Agriculture on R. of Macedonia, Database administration of seeds and seed material	2008
		2.	State statistical office on Republic of Macedonia	Field crops, orchards and vineyards, 2012	State statistical office–Skopje, Dame Gruev-4	2012
	3.	M. Ilievski	The processing of field crops products-authorized lectures in pdf format for students of the Faculty of Agriculture, UGD-Stip	University Goce Delcev-Stip	2012	

Appendix No.3		Syllabus for the first, second and third cycle of study
1.	Course title	CROP ORGANIZATION
2.	Course code	2ZF112812
3.	Study programme	Arable crops, four year study

4.	Organizers of the study programme (faculty, institute, group)	University "Goce Delčev" - Štip, Faculty of Agriculture, Department of Plant Production			
5.	Level of study (first, second, third cycle)	First cycle			
6.	Academic year / semester	Fourth year/first semester	7.	Number of ECTS credits	4
8.	Professor	Prof. Verica Ilieva PhD			
9.	Preconditions for course enrollment	/			
10.	Goals of the course programme: Introducing the students with the basics, concepts and principles in crops organization.				
11.	Content of the course programme: A) Content of lecture: 1. Nature of organization of crop production; 2. Analysis of work activities and its planning; 3. Organizing crops production; 4. Management, employees training and their professional development; 5. Decision making and motivation in crops production; 6. Employability affairs and collective negotiation in crops production enterprises; 7. Integrated pest management; 8. Management in integrated crops production; 9. Communication as a factor in organizing crops production; 10. Development of sustainable production; 11. Mobbing in crops production enterprises; 12. Self-development management; SWOT- analysis in crops production. B) Content of exercises: 1. Work description and specification; 2. Work analysis questionnaire; 3. Composition and content of advertise; 4. How to write effective CV; 5. How to write motivation letter; 6. After-interview selection; 7. Point-system reward; 8. Salary system in enterprise (case example); 9. Carrier management in crops production; 10. Firing procedures; 11. Conflicts and conflict management; 12. Practical motivation examples in arable crops production enterprises.				
12.	Method of study: interactive lectures, theoretical and practical exercises, consultations; case studies; research and presentations; consultations; internship in public & private institutions NGO's and donors.				
13.	Total amount of available time	120			
14.	Distribution of available time	2+1+1			
15.	Form of teaching activities	15.1	Lecture – theoretical training	2	
		15.2	Practice (laboratory, auditory), workshops, outreach and teamwork	1	
16.	Other form of activities	16.1	Team projects	1	
		16.2	Individual projects	1	
		16.3	Individual study	/	
17.	Forms of assessment				

	17.1.	Tests, 2 mid-term tests x 20	40
	17.2.	Case study work/ project (presentation: written and oral)	10
	17.3.	Activity and participation 10 lectures 10 exercises	20
	17.4	Final exam	30
18.	Criteria for assessment (points/grade)	to 50 points	5 (five) (F)
		from 51 to 60 points	6 (six) (E)
		from 61 to 70 points	7 (seven) (D)
		from 71 to 80 points	8 (eight) (C)
		from 81 to 90 points	9 (nine) (B)
		from 91 to 100 points	10 (ten) (A)
19.	Condition for getting a signature and taking the final exam	60% of term activities or minimum 42 points from 2 mid-term exams, project activities and attending to lectures and exercises	
20.	Language in which classes are conducted	Macedonian	
21.	Method of monitoring the quality of instruction	Self- evaluation	

22.	Literature				
	Compulsory literature				
	Ordinal number	Author	Title	Publisher	Year
22.1.	1.	Dobri Petrovski	Human resource management	UKO	2007
	2.	Todor Kralev	Basics of management	IIM	2005
	3.	Gareth Jones, Jennifer George	Contemporary management	ISPPI-Skopje	2009
	Additional literature				
	Ordinal number	Author	Title	Publisher	Year
22.2.	1.	Biljana Bogicevic	Menadzment ljudskih resursa	Beograd	2004
	2	Lloyd Byars, Leslie Rue	Human Resource Management	McGraw-Hill	2006

Appendix No.3		Subject programme from first cycle studies
1.	Course title	Practical work in crop production
2.	Course code	2ZF112912
3.	Study programme:	Field crop production, four year study programmeme

4.	Organizers of the study programme (faculty, institute, group)	Faculty of Agriculture Department of Plant Production			
5.	Level of study (first, second, third cycle)	First cycle			
6.	Academic year / semester	First / seventh semester	7.	Number of ECTS credits	4
8.	Professor	Prof. Ljupco Mihajlov PhD			
9.	Preconditions for course enrollment	/			
10.	Goals of the course programme: Introduction to basic mechanical operations necessary for the successful cultivation of plants. The purpose of practical teaching in this course is understanding field crop production through personal observation and work with appropriate materials according to the programme. In the classes provided for practical instruction students will be introduced with the basic methods and techniques of soil cultivation, fertilization and sowing.				
11.	<p>Content of the course programme:</p> <p>E) Content of the theoretical course programme: 1. Introducing students with the working operations performed in fields in Poland - working conditions; 2. Presence on the field and an explanation of basic soil cultivation. 3. Presence on the field and an explanation of additional soil cultivation; 4. Presence on the field during the reduced soil cultivation; 5. Presence on the field and an explanation of soil fertilization; 6. Presence on the field and an explanation of sowing and planting; 7. Presence on the field and an explanation of mechanical treatment against weeds; 8. Presence on the field and an explanation of the application of mechanical measures for weeds suppression. 9. Application of chemicals to prevent weeds from the air and explanation. 10. Presence on the field and an explanation of irrigation performance; 11. Field presence and explanation of the grain harvest. 12. Field presence and explanation of corn and sunflower harvesting.</p> <p>F) Content of exercises (practical and laboratory) course programme:</p> <p>1. Parameters for assessing of the appropriate time and appropriate quality of soil cultivation; 2. Visual assessment of quality of soil cultivation; 3. Assessment of the quality of extra processing soil cultivation and proposing further work operations; 4. Regulation of plow for primary processing of the field. 5. Regulation of disc cultivator for further processing of the field; 6. Regulation of applicator for fertilizers for mineral fertilization practically at the field. 7. Regulation of grain drill, practically at the field; 8. Regulation of broadcast seeder for spring crops, practically at the field; 9. Regulation of chisel for soil processing between the lines, practically at the field; 10. Regulation of the appropriate dose of herbicides and fluid consumption per area, practically at the field; 11. Regulation of combine during the harvesting of cereals, practically at the field. 12. Regulation of selector and applicator for fungicides for processing of seed material in the storage shed.</p>				
12.	<p>Methods of study:</p> <p>Lectures, theoretical and laboratory exercises; consultations; individual project work; individual learning; preparation lectures for exams and mid-term exams: consultations.</p>				
13.	Total amount of available time	216 hours			
14.	Distribution of the available time	3+2+2			

15.	Forms of teaching activities		15.1.	Lectures - theoretical training	3 hours/week	
			15.2.	Practice (laboratory, auditory), workshops, outreach and teamwork	2 hour/week	
16.	Other forms of activities		16.1.	Team projects	-	
			16.2.	Individual projects	1 hour/week	
			16.3.	Individual study	1 hour/week	
17.	Forms of assessment					
	17.1.	Exams (mid-term exams, exam, electronic testing)			70	
	17.2.	Project activities (oral and written presentation)			10	
	17.3.	Other forms of studying activities			20	
18.	Criteria for assessment (points / grade)		to 50 points		5 (five) (F)	
			from 51 to 60 points		6 (six) (E)	
			from 61 to 70 points		7 (seven) (D)	
			from 71 to 80 points		8 (eight) (C)	
			from 81 to 90 points		9 (nine) (B)	
			from 91 to 100 points		10 (ten) (A)	
19.	Condition for getting a signature and taking the final exam		60% of term activities or minimum 42 points from 2 mid-term exams, project activities and attending to lectures and discussions			
20.	Language in which classes are conducted		Macedonian			
21.	Method of monitoring the quality of instruction		Self-evaluation, Periodic test for students; Survey			
22.	Literature					
	Compulsory literature					
	22.1.	Ordinal number	Author	Title	Publisher	Year
		1.	Ljupco Mihajlov Fidanka Trajkova	Crop production	UGD - Stip	2011
		2.	Kostov T.	Crop production and agro ecology (practicum).	UKIM - Skopje	1994.
	Additional literature					
	22.2.	Ordinal number	Author	Title	Publisher	Year
		1.	Molnar I., Milosev, D., Kurjacki, I.	Crop production (practicum)	Faculty of crop production - Novi Sad	2003

Appendix No.3		Syllabus for the first, second and third cycle of study
1.	Course title	Quality Management

2.	Course code	2MF103712			
3.	Study programme:	Agromanagement , 4 year study programme			
4.	Organizers of the study programme (faculty, institute, group)	University "Goce Delcev" - Stip, Faculty of Agriculture			
5.	Level of study (first, second, third cycle)	First cycle			
6.	Academic year / semester	Fourth year / VIII semester	7.	Number of ECTS credits	4
8.	Professor	Prof. Sasa Mitrev Ph.D			
9.	Preconditions for course enrollment	No			
10.	Goals of the course programme: Quality management in the modern organization. Customer loyalty. Creating a competitive market organizations. Role, importance and implementation of the ISO 9001 family of standards				
11.	<p>Content of the course programme:</p> <ol style="list-style-type: none"> 1. Introduction to quality management (quality as a strategic goal and utility organizations for competitiveness). 2. Quality management system (general requirements relating to the ISO 9001:2008 Quality Management System). 3. Management responsibility (item 5 of the standard ISO 9001:2008). 4. Resource management (item 6 of the standard ISO 9001:2008). 5. Conversion product (item 7.1, 7.2 and 7.3 of the standard ISO 9001:2008). 6. Realization of the product (see section 7.4, 7.5 and 7.6 of the standard ISO 9001:2008). 7. Measurement, analysis and improvement (item 8 of the standard ISO 9001:2008). 8. Introduction to ISO 17025, the competence of testing and calibration laboratories. 9. Introduction to ISO 27001, Information Security Management Systems. 10. Introduction to ISO 14001, Environmental Management. 11. Introducing standard OHSAS 18001 health and safety management. 12. Introduction to ISO 22000 Food Safety Management System. 				
12.	Methods of study: lessons, exams.				
13.	Total amount of available time	120 hours			
14.	Distribution of the available time	2+1+1			
15.	Forms of teaching activities	15.1.	Lectures - theoretical training	2	
		15.2.	Practice (laboratory, auditory), workshops, outreach and teamwork	1	
16.	Other forms of activities	16.1.	Team projects		
		16.2.	Individual projects	1	
		16.3.	Individual study		
17.	Forms of assessment				
	17.1.	Exams (mid-term exams, exam, electronic testing)			70

	17.2.	Project activities (oral and written presentation)	10	
	17.3.	Other forms of studying activities	20	
18.	Criteria for assessment (points / grade)	to 50 points	5(five) (F)	
		from 51 to 60 points	6(six) (E)	
		from 61 to 70 points	7(seven) (D)	
		from 71 to 80 points	8(eight) (C)	
		from 81 to 90 points	9(nine) (B)	
		from 91 to 100 points	10(ten) (A)	
19.	Condition for getting a signature and taking the final exam	/ 60% of term activities or minimum 42 points from 2 mid-term exams, project activities and attending to lectures and discussions		
20.	Language in which classes are conducted	Macedonian		
21.	Method of monitoring the quality of instruction	Self-evaluation		
22.	Literature			
22.1.	Compulsory literature			
	Ordinal number	Author	Title	Publisher
	1.	Institute of accreditation of Republic of Macedonia	Quality management systems - Requirements (ISO EN ISO 9001:2008)	IARM
	2.	Hrvoje Skoko	Quality management	Sinergija, Zagreb, Croatia
	3.	David Hoyle	Quality Systems Handbook (4 th edition)	Butterworth-Heinemann, A member of the Reed Elsevier plc group
22.2.	Additional literature			
	Ordinal number	Author	Title	Publisher
	1.	Institute of accreditation of Republic of Macedonia	ISO 17025, ISO 27001, ISO 14001, ISO 22000, ISO 18001	IARM
	2.			
	3.			

1.	Course title	Farm Management			
2.	Course code	2ZF102512			
3.	Study programme:	Agromanagement , 4 year study programme			
4.	Organizers of the study programme (faculty, institute, group)	University "Goce Delcev"- Stip. Faculty of agriculture - Stip			
5.	Level of study (first, second, third cycle)	First cycle			
6.	Academic year / semester	IV year/ VIII semester	7.	Number of ECTS credits	4
8.	Professor	assi. Prof. Elenica Sofijanova Ph.D			
9.	Preconditions for course enrollment	/			
10.	Goals of the course programme: The course aims are to familiarise students with introductory observations on the importance of farm management through managerial functions of planning, job analysis, recruitment, selection, training and development, as well as measuring the performance of management by developing basic management skills				
11.	<p>Content of the course programme:</p> <p>A) Contents of lectures: 1. Farm management in the twenty-first century; 2. Measuring the performance of management; 3. Economic principles - choice of production levels; 4. Whole farm planning, cash flow budget 5. Farm business organization and yield; 6. Dealing with risk and uncertainty, investment analysis; 7. Obtaining resources for capital management and use of credits; 8. Control and use of land; 9. Human resource management and planning of the agricultural labor force; 10. Improving management capacity 11. Rules and regulations for agricultural labour; 12. Management of self development , SWOT-analysis.</p> <p>B) Contents of exercises: 1. Management in agriculture 2. Accounting records and comparative analysis; 3. Study of economic farm unit; 4. Planning profitability, cash flow and capital investment evaluation (practical examples); 5. Human resource planning and mechanization; 6. Sources of funding-balance sheet and income statement; 7. Tax-practice examples; 8. Marketing (examples); 9. European Union - Farm Management; 10. Agricultural marketing organizations; 11. Cereal markets - examples; 12. Livestock markets, examples;</p>				
12.	<p>Methods of study:</p> <p>Lectures, theoretical and practical exercises, consultations; making independent seminar work; learning home; exam preparatory classes and mid-term tests: consultation.</p>				
13.	Total amount of available time	120 hours			
14.	Distribution of the available time	2 +1 +1			
15.	Forms of teaching activities	15.1.	Lectures - theoretical training	2	
		15.2.	Practice (laboratory, auditory), workshops, outreach and teamwork	1	
16.	Other forms of activities	16.1.	Team projects	0.5	
		16.2.	Individual projects	0.5	

		16.3.	Individual study			/
17.	Forms of assessment					
17.1.	Exams (mid-term exams, exam, electronic testing)				70	
17.2.	Project activities (oral and written presentation)				10	
17.3.	Other forms of studying activities				20	
18.	Criteria for assessment (points / grade)		to 50 points	5(five)	(F)	
			from 51 to 60 points	6(six)	(E)	
			from 61 to 70 points	7(seven)	(D)	
			from 71 to 80 points	8(eight)	(C)	
			from 81 to 90 points	9(nine)	(B)	
			from 91 to 100 points	10(ten)	(A)	
19.	Condition for getting a signature and taking the final exam		/ 60% of term activities or minimum 42 points from 2 mid-term exams, project activities and attending to lectures and discussions			
20.	Language in which classes are conducted		Macedonian			
21.	Method of monitoring the quality of instruction		Self-evaluation, periodic tests for students, questionnaires			
22.	Literature					
	Compulsory literature					
	Ordinal number	Author	Title	Publisher	Year	
22.1.	1.	Donald D. Kay, William M.Edwards, Raticia A. Daffy	Farm Management (VI edition)	Publishing Center TRI	2009	
	2.	Jonathan Turner, Martin Taylor	Applied Farm Management (Second Edition)	Publishing Center TRI	2010	
	3.	Gareth Jones, Jennifer George	Modern Management	ISPPI, Skopje	2009	
	Additional literature					
	Ordinal number	Author	Title	Publisher	Year	
22.2.	1.	Biljana Bogičević	Human Resource Management	Belgrade	2004	
	2.	Lloyd Byars, Leslie Rue	Human Resource Management	McGraw-Hill	2006	

UNIVERSITY ELECTIVE COURSES - Fourth year of study

Appendix No.3		Syllabus for the first, second and third cycle of study
1.	Title of the Course	Fundamentals of Tourism
2.	Code	UGD102212

3.	Study Programme	Tourism		
4.	Organizer of the study programme (unit or institute, Faculty, department)	University Goce Delcev-Stip Faculty of Tourism and Business Logistics Department of Gevgelija		
5.	Cycle (first, second and third cycle)	First cycle		
6.	Academic year / semester	I / I	7.	Number of credits
				8
8.	Professor (s)	Ass. Prof. Zlatko Jakovlev, PhD		
9.	Preconditions for course enrollment	Enrolled in first year studies		
10.	Goals of the course programme:	The objectives are scientific and practical, scientific refers to the acquisition of theoretical knowledge of students about the basics of tourism, and the practical application of scientific knowledge in the hospitality practice.		
11.	Content of the course programme:	Introduction 1. Theoretical and methodological approach to the study of tourism(subject, tasks, goals and methods of tourism studies) 2. Aspects of the scientific study of tourism 3. Theoretical understanding of the concept of tourism 4. Practical importance of defining tourism 5. Tourism and analog appear 6. Socio-economic conditionality tourism 7. Theoretical views on the emergence of tourism 8. Tourist need 9. Factors of tourism 10. Tourism functions 11. Tourism values 12. Tourist destination 13. Tourist attractions and activities 14. Types of tourism 15. Tourist regulation 16. Tourist differential 17. Tourist futurology		
12.	Methods of study::	Lectures, tutorials and laboratory exercises		
13.	Total available time	216 hours		
14.	Distribution of available time	3 + 2 + 2 / per week		
15.	Forms of teaching / learning activities	15.1.	lectures / theoretical - contact teaching, e-teaching	3 hours
		15.2.	theoretical and practical exercises, e-exams, preparation of independent seminar work	2 hours
16.	Other forms of activities	16.1.	Project tasks	1 hours
		16.2.	Individual tasks	1 hours
		16.3.	Home learning	1 hours

17.	Forms of assessment		
17.1.	Tests / oral exams	0-20 points	
17.2.	Seminars (paper / project - presentation: written and/or oral)	10 points	
17.3.	Activity and participation	20 points	
18.	Criteria for assessment (points / score)	up 50 points	5 (five) (F)
		51 to 60 points	6 (six) (E)
		61 to 70 points	7 (seven) (D)
		71 to 80 points	8 (eight) (C)
		81 to 90 points	9 (nine) (B)
		91 to 100 points	10 (ten) (A)
19.	Condition for getting a signature and taking the final exam	60% success from all activities before exam i.e 42 points from two mid-term tests, seminar attendance of lectures and exercises	
20.	Language in which classes are conducted	Macedonian language	
21.	Method of monitoring the quality of teaching	Self-evaluation	

Appendix No.3		Subject programme from first cycle studies			
1.	Course title	BIOLOGY			
2.	Course code	UGD102512			
3.	Study programme:	University elective subject			
4.	Organizers of the study programme (faculty, institute, group)	Faculty of Agriculture Department of Plant Protection			
5.	Level of study (first, second, third cycle)	First cycle			
6.	Academic year / semester	Second / forth Third / sixth	7.	Number of ECTS credits	6
8.	Professor	Ass. prof. Liljana Koleva Gudeva, PhD			
9.	Preconditions for course enrollment	No			
10.	Goals of the course programme: Gaining fundamental knowledge in biology which is necessary for understanding of life and life processes. Gaining of wide knowledge about the living organisms, cell structure, biological systems, as well as understanding of reproduction. Development of proper attitude to the each own health and health of other humans. Understanding of principles of inheritance. Implementation of gained knowledge.				
11.	Content of the course programme: 1. Biology as science of living organisms 2. The cell and cell structural elements				

	3. Nucleic acids 4. Cell cycle 5. Reproduction 6. Basics of genetics 7. Plant cytology 8. Classification of basic types of animal tissues 9. Plant tissues 10. Anatomy, morphology and physiology of plants 11. Anatomy and physiology of animals 12. Phylogenic and taxonomy of life organisms			
12.	Methods of study: research work; work in small groups; individual learning; practical classes; project work; discussion; debate; individual tasks			
13.	Total amount of available time	156 hours		
14.	Distribution of the available time	2 +2 +1		
15.	Forms of teaching activities	15.1.	Lectures - theoretical training	2 hours/week
		15.2.	Practice (laboratory, auditory), workshops, outreach and teamwork	2 hours/week
16.	Other forms of activities	16.1.	Team projects	-
		16.2.	Individual projects	1 hour/week
		16.3.	Individual study	-
17.	Forms of assessment			
	17.1.	Exams (mid-term exams, exam, electronic testing)	70	
	17.2.	Project activities (oral and written presentation)	10	
	17.3.	Other forms of studying activities	20	
18.	Criteria for assessment (points / grade)	to 50 points	5 (five) (F)	
		from 51 to 60 points	6 (six) (E)	
		from 61 to 70 points	7 (seven) (D)	
		from 71 to 80 points	8 (eight) (C)	
		from 81 to 90 points	9 (nine) (B)	
		from 91 to 100 points	10 (ten) (A)	
19.	Condition for getting a signature and taking the final exam	/ 60% of term activities or minimum 42 points from 2 mid-term exams, project activities and attending to lectures and discussions		
20.	Language in which classes are conducted	Macedonian		
21.	Method of monitoring the quality of instruction	Self-evaluation		
22.	Literature			
	22.1.	Compulsory literature		

	Ordinal number	Author	Title	Publisher	Year
	1.	Ass. Prof. Liljana Koleva Gudeva	Cell biology	Authorized lessons	2009
	2.	Ass. Prof. Liljana Koleva Gudeva	Plant Physiology	GDU - Stip	2010
22.2.	Additional literature				
	Ordinal number	Author	Title	Publisher	Year
	1.	Prof. Jordanka Dimova	Phisiology	UKIM - Skopje	2000

Appendix No.3		Subject programme from the first, second and third cycle studies			
1.	Title of the subject	NATIONAL HISTORY			
2.	Code	UGD102112			
3.	Study programmeme	First cycle / University selective course			
4.	Organization of the study programme (unit or institute, department, department)	History and archeology			
5.	Level of study (first, second, third cycle)	First cycle			
6.	Academic year / semester	1/2	7.	Number of ECTS credits	5
8.	Professor	Prof. Kiril Cackov, PhD			
9.	Preconditions for course enrollment	Subscribed 2 semester			
10.	<ul style="list-style-type: none"> - Goals for the course programme: - Students to gain a thorough knowledge of history; - For students to develop critical thinking as a basis for scientific interpretation of human society; - Formation - education as the highest human value; - Training of young researchers and promoting multiculturalism in the Republic. Macedonia - Formation of aesthetic, patriotic and moral values and develop a sense of belonging to their country; - Study of the contents of important historical phenomena, processes and moments from antiquity to the independence of the Republic of Macedonia. 				
11.	Content of the course programme: Subject of history, historiography and auxiliary sciences Creating Ancient Macedonian state Culture and religion of Ancient Macedonia Settlement of the Slavs in the Balkans and in Macedonia The spread of Christianity and literature in Macedonian Slavs Bogomil Movement Byzantine rule in Macedonia Macedonian liberation wars against the Byzantine Empire Independent rulers Average				

	<p>Falling Macedonia under Serbian rule Macedonia under Ottoman rule Resistance against Turkish rule in Macedonia (Mariovo rebellion and insurrection Skanderbeg) Cultural, educational and religious life of the population in Macedonia Liberation wars in the second half of the 19th century Foreign propaganda and the consequences of their actions Macedonia during the eastern crisis The emergence and growth of the Macedonian national revolutionary movement Liberation movement of the late 19th century Ilinden Uprising in Macedonia in 1903 Consequences of the Ilinden Uprising Macedonia after the Ilinden Uprising Continuation of revolutionary activity and the outbreak of the Young Turk revolution in the 19th and 20th century Cultural and national development in the 19th and 20th century Macedonia during the Balkan Wars of 1912/13 First Macedonia during the First World War 1914-1918 Second Macedonia in the period between the two World Wars in the Kingdom of SHS and the Kingdom of Yugoslavia Third Second World War and the Anti-Fascist War in Macedonia 1941-1943 Anti-Fascist War 1944-1945 Historical significance of the Anti Macedonia after the Second World War 1944-1953 Macedonia in the period 1953-1991 Restoration Ohrid arheiposkopija as Macedonian Orthodox Church The collapse of the Yugoslav federation and the independence of Macedonia in 1991</p>			
12.	<p>Methods of study:: Oral Power Point presentation • Lectures • Presentations • Seminars on topics of extra-curricular content • Analysis of text / film / theater / literary works and so on. • Debate and discussion • Analysis of the philosophical problems / problematic learning • Individual assignments (homework, individual presentations, etc.). Own research (internet, bibliography, library, media, etc.)</p>			
13.	Total available funds - 152			
14.	Allocation of the available time 2+2+1			
15.	Forms of instructional activities	15.1	Lectures - theory	2 hours
		15.2	Practice (laboratory auditory), seminars, teamwork	2 hours
16.	Other forms of activities	16.1	Project tasks	hours
		16.2	independent tasks	1 hour
		16.3	Home learning	hours

17.	Forms of assessment	Combined (currently writing and oral final exam)			
	17.1	tests	credits 40		
	17.2	Seminar paper / project (presentation: written and oral)	credits 10		
	17.3	Activity and participation	credits 20		
18.	Criteria for assessment (points/grade)		from 50 stitch	5 (five) (F)	
			From 51 to 60	6 (six) (E)	
			from 61 to 70	7 (seven) (D)	
			from 71 to 80	8 (eight) (C)	
			од 81 до 90	9 (nine) (B)	
			From 91 to 100	10 (ten) (A)	
19.	Condition for getting a signature and taking the final exam		Minimum of 42 points from current activities		
20.	Language of instruction		Macedonian		
21.	Method of monitoring the quality of teaching		Supporting student self-evaluation and evaluation		
22.	literature				
	22.1	Compulsory literature			
	.	Author	Title	Publisher	Year
	1.		Историја на Македонскиот народ, т. 1-3,	Институт за национална историј	1969,1998,199,2002
	2.	- д-р Александар Стојановски. д-р Иван Кантарциев, д-р Данчо Зогравски, д-р Михаило Апостолски	Историја на Македонскиот народ		1988
3.	Велјановски, Н.	Македонија 1945-1991- пат до независноста	ИНИ	2002	
	22.2	Additional literature			