Study Program: GENERAL MEDICINE

Code	FIRST YEAR – 1st SEMESTER			
	COURSE	**Credits**	**Hours**	**Overall workload**
3MF100212	Anatomy 1	9	3+4+2	270
3MF129212	Biophysics	5	2+2+1	150
3MF134012	Chemistry	6	3+2+1	180
3MF100812	Biology	4	2+1+1	120
3MF121312	Introduction to medicine	2	2+0+1	60
UGD102712	Sports and recreation*	0	0+0+2	0
UGD100112 UGD100212 UGD100312 UGD100412 UGD100512 UGD100612	Foreign language 1 – English Foreign language 1 – Italian Foreign language 1 – German Foreign language 1 – French Foreign language 1 – Spanish Foreign language 1 – Russian	4	0+0+4	120

Code	FIRST YEAR –2nd SEMESTER			
	COURSE	**Credits**	**Hours**	**Overall workload**
3MF100312	Anatomy 2	7	3+3+1	210
3MF103912	Histology and embryology 1	7	3+3+1	210
	Introduction to clinical practice	4	2+1+1	120
	Human genetics	4	2+1+1	120
	Medical psychology	4	2+1+1	120
3MF120012	Computer science	4	2+1+1	120

Code	SECOND YEAR – 3rd SEMESTER			
	COURSE	**Credits**	**Hours**	**Overall workload**
3MF103512	Physiology 1	7	3+3+1	210
3MF100412	Anatomy 3	7	3+3+1	210
3MF104012	Histology and embryology 2	5	2+2+1	150
3MF101712	Biochemistry 1	5	2+2+1	150
3MF120012	Biostatistics and medical informatics	4	1+2+1	120
	Elective course	2	2+0+1	60

Code	SECOND YEAR – 4th SEMESTER			
	COURSE	**Credits**	**Hours**	**Overall workload**
3MF103612	Physiology 2	7	3+3+1	210
3MF101412	Microbiology and parasitology 1	6	3+2+1	180
3MF100912	Biochemistry 2	5	2+2+1	150

3MF100712	Immunology	4	2+1+1	120
3MF122112	Basic concepts in scientific research	2	2+0+1	60
	First Medical Aid	2	1+1+1	60
3MF121712	Medical ethics	2	2+0+1	60
	Elective course	2	2+0+1	60

Code	THIRD YEAR – 5th SEMESTER			
	COURSE	Credits	Hours	Overall workload
3MF101512	Microbiology and parasitology 2	6	3+2+1	180
3MF103112	Pathophysiology 1	6	3+2+1	180
3MF102812	Anatomic pathology 1	6	3+2+1	180
3MF113012	Pharmacology and toxicology 1	5	2+2+1	150
3MF108112	Clinical examination 1	5	2+2+1	150
	Elective course	2	2+0+1	60

Code	THIRD YEAR – 6th SEMESTER			
	COURSE	Credits	Hours	Overall workload
3MF103212	Pathophysiology 2	6	3+2+1	180
3MF102912	Anatomic pathology 2	6	3+2+1	180
3MF113112	Pharmacology and toxicology 2	5	2+2+1	150
3MF108212	Clinical examination 2	5	2+2+1	150
3MF120412	Epidemiology	4	2+1+1	120
	Medical English	2	1+1+1	60
	Elective course	2	2+0+1	60

Code	FOURTH YEAR – 7th SEMESTER			
	COURSE	Credits	Hours	Overall workload
3MF106712	Internal medicine 1	9	4+4+1	270
3MF107112	Infectious diseases 1	5	2+2+1	150
3MF120912	Ecology of health and hygiene	2	2+0+1	60
3MF111412	Radiology	4	2+1+1	120
3MF106312	Dermatovenerology	4	2+1+1	120
3MF110012	Oncology and radiotherapy	2	2+0+1	60
3MF110612	Sports medicine	2	2+0+1	60
	Elective course	2	2+0+1	60

Code	FOURTH YEAR – 8th SEMESTER			
	COURSE	Credits	Hours	Overall workload
3MF106812	Internal medicine 2	9	4+4+1	270
3MF107112	Infectious diseases 2	6	3+2+1	180
3MF108512	Neurology	5	2+2+1	150
3MF111312	Psychiatry	4	2+1+1	120
3MF126612	Physical medicine and rehabilitation	2	1+1+1	60
3MF109412	Nuclear medicine	2	2+0+1	60
	Elective course	2	2+0+1	60

Code	FIFTH YEAR – 9th SEMESTER			
	COURSE	Credits	Hours	Overall workload
3MF110812	Pediatrics 1	5	2+2+1	150
3MF117412	Surgery1	6	3+2+1	180
3MF115912	Gynecology and obstetrics 1	5	2+2+1	150
3MF116912	Otorhinolaringology	4	2+1+1	120
3MF117812	Orthopedics and traumatology	2	1+1+1	60
3MF130512	Ophtamology	4	2+1+1	120
	Anesthesiology and reanimation	2	1+1+1	60
	Elective course	2	2+0+1	60

Code	FIFTH YEAR – 10th SEMESTER			
	COURSE	Credits	Hours	Overall workload
3MF110912	Pediatrics 2	6	3+2+1	180
3MF117512	Surgery 2	6	3+2+1	180
3MF116012	Gynecology and obstetrics 2	6	3+2+1	180
3MF115312	Emergency medicine	2	1+1+1	60
3MF117212	Forensic medicine	4	2+1+1	120
3MF121612	Occupational medicine	2	2+0+1	60
	Family medicine	2	2+0+1	60
	Elective course	2	2+0+1	60

Code	SIXTH YEAR – 11th SEMESTER			
	COURSE	Credits	Weeks	Overall workload
	Internal Medicine – clinical practice	12	8	360
	Surgery – clinical practice	11	7	330
	Gynecology and Obstetrics – clinical practice	7	4	210

Code	SIXTH YEAR – 12th SEMESTER			
	COURSE	Credits	Weeks	Overall workload
	Pediatrics – clinical practice	7	4	210
	Infectious diseases– clinical practice	5	3	150
	Public health– clinical practice	4	2	120
	Elective clinical course	4	2	120
	Bachelor thesis	10		300

LIST OF ELECTIVE COURSES

Code	SECOND YEAR – 3rd SEMESTER			
	COURSE	Credits	Hours	Overall workload
	Anthropology	2	2+0+1	60
3MF121812	Health care organization	2	2+0+1	60
	Social medicine	2	2+0+1	60

Code	SECOND YEAR –4th SEMESTER			
	COURSE	Credits	Hours	Overall workload
3MF120812	Basic concepts in public health	2	2+0+1	60
	Communication skills	2	2+0+1	60
3MF103312	Fetal anatomy and malformations	2	2+0+1	60

Code	THIRD YEAR- 5th SEMESTER			
	COURSE	Credits	Hours	Overall workload
3MF120312	Health management	2	2+0+1	60
	Developmental psychopathology	2	2+0+1	60
3MF111612	Contemporary diagnostic methods in medicine	2	2+0+1	60

Code	THIRD YEAR – 6th SEMESTER			
	COURSE	Credits	Hours	Overall workload
3MF110512	Basic concepts in clinical pharmacology	2	2+0+1	60
	Clinical biochemistry	2	2+0+1	60
3MF110412	Clinical microbiology	2	2+0+1	60

Code	FOURTH YEAR –7th SEMESTER			
	COURSE	Credits	Hours	Overall workload
3MF107812	Clinical immunology	2	2+0+1	60
	Counselling and psychotherapy	2	2+0+1	60
	Oncogenic viruses	2	2+0+1	60

Code	FOURTH YEAR – 8th SEMESTER			
	COURSE	Credits	Hours	Overall workload
3MF121112	Intrahospital infections	2	2+0+1	60
3MF121412	Control of infectious and non-infectious diseases	2	2+0+1	60
	Transfusion medicine	2	2+0+1	60

Code	FIFTH YEAR – 9th SEMESTER			
	COURSE	Credits	Hours	Overall workload
	Maxillofacial surgery	2	2+0+1	60
3MF121412	Sexually transmitted diseases	2	2+0+1	60

Code	FIFTH YEAR – 10th SEMESTER			
	COURSE	Credits	Hours	Overall workload
3MF123212	Urology	2	2+0+1	60
3MF106112	Geriatrics	2	2+0+1	60

Code	SIXTH YEAR – 12th SEMESTER			
	COURSE – Elective clinical course	Credits	Weeks	Overall workload
	Ophthalmology – clinical practice	4	2	120

	Otorhinolaynogology – clinical practice	**4**	**2**	**120**
	Orthopedics and traumatology – clinical practice	**4**	**2**	**120**
	Transfusion medicine – clinical practice	**4**	**2**	**120**
	Dermatovenerology – clinical practice	**4**	**2**	**120**
	Radiology – clinical practice	**4**	**2**	**120**
	Physical Medicine and Rehabilitation – clinical practice	**4**	**2**	**120**
	Neurology – clinical practice	**4**	**2**	**120**
	Psychiatry – clinical practice	**4**	**2**	**120**

I Annex 3

STUDY PROGRAMS CONTAINING CORRESPONDING INFORMATION ACCORDING TO ARTICLE 4 OF THIS DOCUMENT

Annex No.3	**Program of the Course - first cycle studies**				
1.	**Title of the Course**	**Anatomy 1**			
2.	**Code**	3MF100212			
3.	**Study Program**	General medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	Faculty of Medical Sciences, Faculty of Medicine			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	First semester	**7.**	**Number of credits**	9
8.	**Professor (s)**	Prof. Svetlana Jovevska, PhD			
9.	**Requirements for enrollment the Course**	enrolled first semester			
10.	**Purposes of the curriculum (competencies):**Introduction to anatomy as morphological science, mastering of professional terminology, complete study of the locomotor system.				
11.	**Content of the course program:**				

	Course content: Theoretical instruction 1.Introduction to anatomy and osteology, types of bones, bone components, specialized terminology. 2.Bones of the immovable and movable parts of the upper extremities 3.Bones of the immovable and movable parts of the lower extremities 4.Bones of the chest and the trunk 5.Introduction to syndesmology, joints, components of joints, types of joints 6.Syndesmology of the upper extremities 7.Syndesmology of the trunk and the lower extremities 8.Bones of the head (skull and face) 9. Joints of the head (skull and face), the trunk and the vertebral column 10.Introduction to myology, angiology, neurology 11.Myology, angiology and neurology of the upper extremities 12.Myology, angiology and neurology of the lower extremities Practical instruction 1.Orientation of bones: the clavicle, the scapula, the humerus, the forearm bones (the radius and the ulna) 2.Hand skeleton: carpals, metacarpals and phalanges; the chest and the vertebral column 3.Skeleton of the pelvic girdle - coxae, sacrum and coccyx 4.Skeleton of the femur, the tibia, the fibula and the patella 5.Foot skeleton –tarsals, metatarsals and phalanges 6.Joints of the upper extremities, the chest and the vertebral column 7.Joints of the lower extremities 8.Bones of the head (skull and face) 9.Joints of the head (skull and face)

	10.Muscles and blood vessels of the upper extremities 11.Muscles and blood vessels of the lower extremities 12.Innervation of the upper and lower extremities			
12.	**Learning methods:** – Interactive lessons, individual consultations with students			
13.	**Total available time**		9 EKTS x 30 h = 270 h	
14.	**Distribution of available time**		45+60+30+35 +100 = 270 h	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	45 hours
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	60 hours
16.	**Other activities**	**16.1.**	**Project tasks**	**30 hours**
		16.2.	**Individual tasks**	**35 hours**
		16.3.	**Home learning**	**100 hours**
17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		**70 points**

	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**
18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	60% achievement on all pre-exam activities, i.e. 42 points earned on midterm tests, seminar paper, attendance and participation	
20.	**Language of teaching / study**	**English**	
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**	

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Sinelnikov	AnatomicalAtlas ofman(I, II, IIIpart)	**Springer**	**2008**
		2.	F.N. Netter	Atlas of human anatomy	**Springer**	**2011**
		3.				
		4.				
	22.2.	**Additional literature**				

		No.	Author	Title	Publisher	Year
		1.	Sinelnikov	Anatomical Atlas of man(I, II, IIIpart)	**Willey**	**1998**
		2.	F.N. Netter	Atlas of human anatomy	**Springer**	**2001**
		3.				

Annex No. 3	**Course description**			
1.	Course title	**Biophysics**		
2.	Course code	**3MF129212**		
3.	Study programme	Medicine		
4.	Organizer of the study programme (faculty/ institute, department, academic programme)	Goce Delcev University Faculty of Medical Sciences		
5.	Level of studies (first, second, third cycle)	First and second cycle integrated studies		
6.	Academic year / semester	First semester	7.	Number of credits: 5
8.	Lecturer / Instructor	Assistant professor Zdenka Stojanovska		
9.	Course prerequisites	Enrolled first semester		
10.	Course objectives (competences): Consolidation and broadening of the basic theoretical knowledge of physics and its application in medical science.			
11.	Course content: 1. Mechanics, biomechanics. 2. Real systems, energy, work and power, elasticity and plasticity 3. Mechanical oscillations and mechanical waves. Bioacoustics. Ultrasound and its application in medicine 4. Biomechanics of fluids; Ideal and real fluids 5. Thermodynamic. Transport Processes in bio systems; 6. Electrical phenomena, electrical signals in the body. 7. Physical basis of electro diagnostic and electrotherapy. 8. Basic phenomena and laws in optics. Optical instruments; 9. The light and matter. 10. Thermal radiation. Luminescence. IC and UV radiation. Lasers. 11. Interaction of ionization radiation with matter, biological effects. 12. Application of ionizing radiation in diagnostic and therapy.			
12.	Course methodology: discussions, laboratory and numerical exercises,			

	homework, individual projects.			
13.	Total amount of available time:	5 ECTS x 30 h = 150 hours		
14.	Distribution of available time:	30+30+15+10+65 = 150 hours		
15.	Forms of instruction	15.1.	Lectures	30 hours
		15.2.	Practice(laboratory, auditory), seminars, team work	30 hours
16.	Other forms of activities	16.1.	Project work	15 hours
		16.2.	Individual work	10 hours
		16.3.	Homework	65 hours

17.	Assessment methods and criteria		
	17.1.	Tests	70 points
	17.2.	Seminar papers/project (presentation: oral and written)	10 points
	17.3.	Attendance and participation	20 points

18.	Grading system	0 - 50 points	5 (five) (F)
		51 - 60 points	6 (six) (E)
		61 - 70 points	7 (seven) (D)
		71 - 80 points	8 (eight) (C)
		81 - 90 points	9 (nine) (B)
		91 - 100 points	10 (ten) (A)
19.	Signature and final exam prerequisites	60% achievement on all pre-exam activities, i.e. 42 points earned on midterm tests, seminar paper, attendance and participation	
20.	Language of instruction	English	
21.	Course evaluation	Self-evaluation	

22.	Literature:	
	22.	Required literature

	1.	No.	Author	Title	Publisher	Year
		1.	R. Glaser	Biophysics	Springer	2005
		2.				
		3.				

Annex No. 3	**Course description**				
1.	Course title	**Chemistry**			
2.	Course code	3MF134012			
3.	Study programme	General Medicine			
4.	Organizer of the study programme (faculty/ institute, department, academic programme)	Goce Delcev University Faculty of Medical Science Department of Fundamental Medical Science			
5.	Level of studies (first, second, third cycle)	First and second cycle integrated studies			
6.	Academic year / semester	first semester	**7.**	**Number of credits**	6
8.	Lecturer / Instructor	Prof. Rubin Gulaboski			
9.	Course prerequisites	Enrolled first year			
10.	Course objectives (competences): Students are introduced to the basics of general chemistry, structure of atoms and molecules, nomenclature, chemical reactions, as well as to the processes of thermodynamic equilibriums, buffers, hydrolysis. Also, the basic concepts of organic chemistry are considered.				
11.	Course content: <u>Theoretical instruction:</u> 1. Introduction. Matter, properties of the matter 2. Atom, structure of atom; 3. Nomenclature of inorganic compounds; 4. Atomic-molecular theory, introduction to mole and amount of compounds,				

	5. Periodic table of the elements, properties of some of the elements;. Chemical bonds, 6. Chemical reactions; 7. Solutions-acids, bases, salts, Gas laws; 8. Redox reactions. 9. Thermochemistry and thermodynamics; 10. Buffers, Hydrolysis, 11. Organic chemistry, alcohols and carboxylic acids. 12. Aldehydes, ketones and aromatic compounds <u>Practical instruction:</u> 1. Introduction to general chemistry; 2. Nomenclature; 3. Estimations on the basis of chemical formulas; 4. Redox reactions; 5. Solutions, preparation and properties of solutions; 6. Concentration of solutions; 7. Acids, bases, salts, Concept of pH, 8. Buffers 9. Buffers capacity 10. Hydrolysis, 11. Reactions of alcohols and carboxylic acids; 12. Organic synthesis	
12.	Course methodology: Lectures, exercises, seminars, research and practical activities	
13.	Total amount of available time:	6 ECTS x 30 h = 180 hours
14.	Distribution of available time:	45+30+15+20+70 = 150 hours

15.	Forms of instruction	15.1.	Lectures	45 hours
		15.2.	Practice (laboratory, auditory), seminars, team work	30 hours
16.	Other forms of activities	16.1.	Project work	15 hours
		16.2.	Individual work	20 hours
		16.3.	Homework	70 hours

17.	Assessment methods and criteria		
	17.1.	Tests	70 points
	17.2.	Seminar papers/project (presentation: oral and written)	10 points
	17.3.	Attendance and participation	20 points

18.	Grading system	0 - 50 points	5 (five) (F)
		51 - 60 points	6 (six) (E)
		61 - 70 points	7 (seven) (D)
		71 - 80 points	8 (eight) (C)
		81 - 90 points	9 (nine) (B)
		91 - 100 points	10 (ten) (A)
19.	Signature and final exam prerequisites	60% achievement on all pre-exam activities, i.e. 42 points earned on midterm tests, seminar paper, attendance and participation	
20.	Language of instruction	English	
21.	Course evaluation	Self-evaluation	

22.	Literature:					
	22. 1.	Required literature				
		No.	Author	Title	Publisher	Year
		1.	Rubin Gulaboski	General Chemistry-	Goce Delcev	2010

				handbook for students available at www.rgulaboski.yolasite.com	University-Stip	
		2.	Dušan Malešev	Odabrana poglavlja fizičke hemije	D. Malešev, Beograd	2003
		3.	Rubin Gulaboski	Lectures in ppt format, available at www.gulaboski.yolasite.com	Goce Delcev-University, Stip	2010
	22.2.	Supplementary literature				
		No.	Author	Title	Publisher	Year
		1.	Z. Bassam. Z. Shakhashiri, R. Schreiner	Workbook for General Chemistry-third edition	University of Wisconsin-Madison	2004
		2.	D. A. McQuarrie, P. A. Rock E. B. Gallogly	General Chemistry-fourth edition	University of California	2011
		3.				

Annex No.3	**Program of the Course - first/second/third cycle studies**

1.	**Title of the Course**	**Biology**
2.	**Code**	3MF100812
3.	**Study Program**	Medicine

4.	**Organizer of the study program (unit or institute, Faculty, department)**	University “Goce Delcev” - Stip Faculty of medical science Department of fundamental medical science			
5.	**Cycle (first, second and third cycle)**	First cycle			
6.	**Academic year / semester**	First semester	**7.**	**Number of credits**	4
8.	**Professor (s)**	Assistant professor Nevenka Velickova PhD			
9.	**Requirements for enrollment the Course**	Enrolled first year of studies			
10.	**Purposes of the curriculum (competencies):** The purpose of this subject is for the students to get familiar with the routines, techniques and methods that are related with microscopy, as well to get basic knowledge in the field of cell biology. They study the cytological methods used in medicine which are especially important in the diagnosis of certain diseases. Students develop specific competences in development of scientific research procedures that are used with microscopy, building an analytical approach that will be used during the diagnostic of certain hereditary and nonhereditary diseases, develop basic theoretical knowledge for the cell and cell organelles, especially the nucleus structure and constitution of the whole genetic material. All membrane and non-membrane organelles are included with special review on their functions and associated pathologies. In this way the students will be able to identify a normal cell from physiologically amended cell. Also the students have a goal to get familiar with the structure and function of macromolecules in the living cell and the clinical-biochemical correlations in it. All the theoretical knowledge that the students gather in this subject are controlled and determined with practical laboratory work and practice.				
11.	**Content of the course program:**				

	• Composition of the cell • Chemical composition of the cell • Cell membrane structure • Transport through the cell membrane • Endoplasmic reticulum structure • Golgi apparatus structure • Mitochondrial structure • Structure of lysosomes and peroxisomes • Cytoskeleton • Structure of the nucleus • Cell division • Cell differentiation • Apoptosis			
12.	**Learning methods:** Lectures,exercises,seminars research and practical activities			
13.	**Total available time**		4 ECTS x 30 h = 120 hours	
14.	**Distribution of available time**		30+15+15+10+50 = 120 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	30 hours
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	15 hours
16.	**Other activities**	**16.1.**	**Project tasks**	15 hours
		16.2.	**Individual tasks**	10 hours
		16.3.	**Home learning**	50 hours
17.	**Method of assessment**			

	17.1.	**Tests / oral exams**		**70 points**
	17.2.	**Seminars (paper / project - presentation: written and/or oral)**		**10 points**
	17.3.	**Activity and participation**		**20 points**
18.	**Assessment Criteria (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.	**Signature requirement and passing the final exam**		42 points acquired	
20.	**Language of teaching / study**		English	
21.	**Method of monitoring the quality of teaching**		Self-evaluation	

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Michael H..Ross; Pavlina Vojnic	Cell and molecular biology	Tabernakul	2010

		2.	Tomas Pollard; William Earnshaw	Cell Biology	Elsevier	2008
		3.	Liljana Bozinovska	Physiology of the eukaryotic cell		
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				
		2.				
		3.				

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Introduction to medicine**			
2.	**Code**	3MF121312			
3.	**Study Program**	Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences Department of Public health and Health Care			
5.	**Cycle (first, second and third cycle)**	First cycle			
6.	**Academic year / semester**	First year/first semester	**7.**	**Number of credits**	2
8.	**Professor (s)**	Prof. d-r Gorgi Sumanov			
9.	**Requirements for enrollment the Course**	Enrolled first year			
10.	**Purposes of the curriculum (competencies):** This course enables students to gain general knowledge of medicine as a science. Students will learn about basic principles and tasks of medicine, history of medicine and medical education, principles of healthcare organization, health and the process of illness, medical professions – ethical and legal aspects. The course provides information about international and national healthcare organizations.				

11.	**Content of the course program:** 1. Principles and tasks of medicine. History of medicine 2. Health and factors that influence population health 3. The specifics of medicine as a profession 4. Diseases, types of medical practices 5. Medical education 6. Clinical medicine 7. Health care 8. Organization and levels of healthcare system 9. Health globalization 10. Current health status in the world 11. Organizations in the health field 12. Medical information			
12.	**Learning methods:** Lectures, individual tasks, collaborative lectures, group discussions			
13.	**Total available time**		60 hours	
14.	**Distribution of available time**		2+0+1/ per week	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	30 hours
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	
16.	**Other activities**	**16.1.**	**Project tasks**	**5 hours**
		16.2.	**Individual tasks**	**10 hours**
		16.3.	**Home learning**	**15 hours**

17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		**70 points**
	17.2.	**Seminars (paper / project - presentation: written and/or oral)**		**10 points**
	17.3.	**Activity and participation**		**20 points**
18.	**Assessment Criteria (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.	**Signature requirement and passing the final exam**		**Minimum 42 points**	
20.	**Language of teaching / study**		**English**	
21.	**Method of monitoring the quality of teaching**		**Self-evaluation**	

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**

		1.	W. Bynum	The history of medicine	Oxford	2003

Annex No.3	Program of the Course - first cycle studies				
1.	**Title of the Course**	**Sport and recreation**			
2.	**Code**	UGD102712			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	“Goce Delcev” University - Stip Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	first	**7.**	**Number of credits**	0
8.	**Professor (s)**	Associate Prof. Biljana Popeska, PhD			
9.	**Requirements for enrollment the Course**	Enrolled first year			
10.	**Purposes of the curriculum (Competencies):** Fulfillment of students’ needs for movement and physical activity. Maintenance and development of students’ motor abilities.				
11.	**Content of the course program:** 1.Basic physical preparation (introduction to fundaments and basic principles of physical activity, exercise for strengthening of certain muscle groups) 2. Basic physical preparation (introduction to and application of different forms of warming, exercises for strengthening of certain muscle groups) 3. Aerobics, martial arts and artistic gymnastics (according to the structure of the group) 4. Outdoor activities - hiking and orientation 5. Basketball (practicing basic basketball elements - travelling, passing, dribbling, double dribbling) 6. Basketball (play) 7. Table tennis and badminton 8. Table tennis and badminton 9. Volleyball (play)				

	10. Handball (play) 11. Aerobics, martial arts, elementary games (according to the group structure) 12. Testing motor abilities, elementary games, modern and traditional dances			
12.	**Learning methods:** method of practical exercise, method of sport training			
13.	**Total available time**		30 hours	
14.	**Distribution of available time**		0+0+2/ per week	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching, e-teaching**	0
		15.2.	**theoretical and practical exercises, e-exams, preparation of independent seminar work**	20 hours
16.	**Other forms of activities**	**16.1.**	**Project tasks**	5 hours
		16.2.	**Individual tasks**	5 hours
		16.3.	**Home learning**	
17.	**Method of assessment**			/
	17.1.	**Tests / oral exams**		0
	17.2.	**Seminars (paper / project - presentation: written and/or oral)**		0
	17.3.	**Activity and participation**		0
18.	**Assessment Criteria (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.	**Signature requirement and passing the final exam**		60% presence on the practical activities	
20.	**Language of teaching / study**		**English**	

21.	**Method of monitoring the quality of teaching**	Motor tests, observation, self-evaluation

22.	**Literature**					
		Required literature				
		Ordinal number	Author	Title	Publisher	year
	22.1.	1.	Kukolj.M	Antropomotorika	Faculty of sport and physical education, Belgrade	2006
		2.	Wilmore, J. & Costill, D.	Physiology of sport and exercise, (Third edition),	Champaign: Human Kinetic, Illinois.	2002
		3.	Malacko,J.	Bases of sports training (Osnove sportskog treninga)	Sports academy, Belgrade	2000
		Additional literature				
		Ordinal number	Author	Title	Publisher	year
	22.2.	1.	Haywood, K., & Getchell, N.	Life span motor development	Champaign: IL. Human Kinetics.	2004
		2.	Magill, R. & Rouge.B	Motor Learning	Broun Publishers, Louisiana	1989
		3.	Malina, R., Bouchard, C. & Bar – Or, O	. Growth, Maturation and Physical Activity (Second Edition).	Champaign: IL. Human Kinetics.	Malina, R., BoucharD

Annex No.3	Program of the Course - first cycle studies			
1.	**Title of the Course**	**Foreign Language1 (English 1)**		
2.	**Code**	UGD100112		
3.	**Study Program**	General Medicine		
4.	**Organizer of the study program(unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences		
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle		
6.	**Academic year / semester**	first semester	**7.** **Number of credits**	4
8.	**Professor (s)**	Prof. Biljana Ivanovska, PhD Prof. Tole Belčev and Senio Lecturer MA Snezhana Kirova		
9.	**Requirements for enrollment the Course**	Enrolled first year		
10.	**Purposes of the curriculum (competencies):**The aim ofthe course is toenable studentsto supplementand expand theirlanguage skillsandto use themin specificsituations,verbal communications in medicinethroughthe integrated useof linguisticfeaturesof discourse.			
11.	**Content of the course program:**			

	Medicaltexts areorganizedaccording to the classificationof humanbodysystems.Practicingpronunciationmedical terms, translation of certain termsand phrases, lexicalexercisesfor presentation andevaluation ofmedical terminology,exercisesto prepare studentsto be informed,selectiveand analyticalreadingthroughdeductiveandinductiveconclusion, trainingstudentsforself-directed,write a shortdialogue, summaries, opinions or short articlesona given topic.			
12.	**Learning methods:** seminars, interactivemethod: group work, lectures, homework, papers, discussion, debate, cooperativelearningtechniques, individual tasks, simulationextracurriculareducationalactivities, independent learning.			
13.	**Total available time**		4 ECTS x 30 h = 120 hours	
14.	**Distribution of available time**		0+0+30+30 +30 = 120 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures - theoretical teaching**	0
		15.2.	Exercises(laboratory,theoretical), seminars, teamwork	0
16.	**Other forms of activities**	**16.1.**	**Project tasks**	30
		16.2.	**Individual tasks**	30
		16.3.	**Home learning**	60
17.	**Method of assessment**			
	17.1.	**Tests**		**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**		**10 points**
	17.3.	**Activity and participation**		**20 points**
18.	**Assessment Criteria (points**			

	/score)	**up 50 points**	**5**
19.	**Signature requirement and passing the final exam**	51 to60 points	**6**
		61 to70 points	**7**
		71 to 80 points	**8**
		81 to90points	**9**
		91 to100 points	**10**
		60% ofthe success of the pre-test activities, and 42points from two colloquia, seminars, attendance at lectures and exercises	
20.	**Language of teaching / study**	**English**	
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**	

22.	**Literature**					
		Required literature				
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.1.	**1.**	**Pandora Dimovska**	Englishfor medicalanddental	**UKIM**	**2000, Skopje**
		2.				
		3.				

Annex No.3	Program of the Course - first/second/third cycle studies				
1.	**Title of the Course**	**Foreign Language1 (Italian language 1)**			
2.	**Code**	UGD100212			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of ***Medical Sciences***			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	first semester	**7.**	**Number of credits**	4
8.	**Professor (s)**	Assistant Professor Biljana Ivanovska Professor Tole Belcev Senior Lecturer Snezana Kirova			
9.	**Requirements for enrollment the Course**	Enrolled first year			
10.	**Purposes of the curriculum (competencies):** Students are to get acquainted with the basic notions of essential Italian vocabulary used in situation from the everyday life; develop ability to ask and to give information, to greet, to introduce themselves, to describe the environment where they live and act, to describe a person's physical appearance, to speak about their habits and interests, to communicate on the telephone, to order in a restaurant, to narrate events in the past etc. Introduction to basic vocabulary, reading, listening, speaking and writing skills practice. Acquisition of reading and writing skills and basic grammatical word classes: definite and indefinite article, gender and number of the nouns and adjectives, descriptive, possessive, demonstrative, interrogative; subject pronouns, numerals, present				

	tense, prepositions, adverbs of place, etc.			
11.	**Content of the course program:** 1. The alphabet, pronunciation, noun, personal information, greetings and farewells 2. Adjectives, personal pronouns, nationality 3. Definite articles 4. The verbs "to have" and "to be" 5. Present simple tense: regular verbs; formal, polite form 6. Writing letters, talking on the phone, requesting and providing information 7. Describing physical appearance, regions and cities in Italy 8. Present simple tense: irregular verbs 9. Leisure activities; describing the environment 10. Modal verbs, numbers, days of the week, telling time 11. Uses of the prepositions, expressing uncertainty, gratitude, indicating possession 12. Uses of the adverbs of place; possessive adjectives			
12.	**Learning methods:** Interactive exercises, group work, essays, homework, seminar paper, discussion, debate, lectures, techniques of cooperative learning, individual exercises, simulation of extracurricular educational activities, self-directed learning, use of e-learning in lectures and practical exercises.			
13.	**Total available time**		4 ECTS x 30 h = 120 hours	
14.	**Distribution of available time**		0+0+30+30 +30 = 120 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	

		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	
16.	**Other activities**	**16.1.**	**Project tasks**	**30 hours**
		16.2.	**Individual tasks**	**30 hours**
		16.3.	**Home learning**	**60 hours**

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper / project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**

18.	**Assessment Criteria (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.	**Signature requirement and passing the final exam**	60% success from all pre-exam activities or 42 points from the mid-term tests and the	

		seminar paper as well as attendance and participation in class
20.	**Language of teaching / study**	Macedonian and Italian language
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	MARIN,T. & MAGNELLI,S	Progetto italiano 1(Libro dello studente)	Edilingua	
		2.	MARIN,T. & MAGNELLI,S	Progetto italiano 1 (Quaderno degli esercizi)	Edilingua	
		3.				
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				
		2.				
		3.				

Program of the course - first cycle of study-Anex 3							
1.	Course title	**Foreign language 1 (German language 1)**					
2.	Code	UGD100312					
3.	Study programme	General medicine					
4.	Organizer of the study programme (unit/ institute, department)	University Goce Delcev Faculty of Medical science					
5.	Level of study (first, second, third cycle)	Integrated studies first and second cycle					
6.	Academic year / semester	First semester	7.	Number of ECTS credits	6		
8.	Professor	Biljana Ivanovska PhD, Marica Tasevska					
9.	Preconditions for course enrolment	Enrolled first year					
10.	Goals of the syllabus (competences): Development of the written and spoken competence and acquiring the modern and current events in the German-speaking countries.						
11.	Content of the syllabus: Basic German vocabulary, reading, listening, speaking and writing.						
12.	Methods of study: seminars, interactive method: group work, papers, homework, working papers, discussion, debate, techniques of cooperative learning, individual tasks, simulation extracurricular educational activities, independent learning.						
13.	Total amount of available time:	4 ECTS x 30 h = 120 hours					
14.	Distribution of available time:	0+0+30+30 +30 = 120 hours					
15.	Forms of teaching activities	15.1.	Lectures- theoretical classes	0			
		15.2.	Practice(laboratory, auditory) seminars, team work	0			
16.	Other forms of activities	16.1.	Project tasks	30 hours			
		16.2.	Individual tasks	30 hours			
		16.3.	Homework	60 hours			
17.	Forms of assessment						
	17.1.	Tests	60				
	17.2.	Seminar paper/project (presentation: oral and written)	10				
	17.3.	Activity and participation					
	17.4.	Oral 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 70points	7 (seven)	(D)			
		from 71to 80 points	8 (eight)	(C)			
		from 81to 90 points	9 (nine)	(B)			

		from 91 to 100 points	10 (ten) (A)
19.	Condition for getting a signature and taking the final exam		
20.	Language in which the classes are conducted	German language, Macedonian language	
21.	Method of monitoring the quality of instruction	Self-evaluation	

22.	Literature:					
	22.1.	Compulsory literature				
		Ordinal number	Author	Title	Publisher	Year
		1.	Susanne Kalender Petra Klimazyk	Schritte international 1Deutsch als Fremdsprache/	Hueber Verlag	2006
		2.	Dr. Dimitrija Gacov	Deutsche Grammatik	National University Library “NUB Kliment Ohridski”	Skopje 1995
		3.	Ranka Grceva Peter Rau	Grosses Makedonisch-Deutsch, Deutsch-Makedonisches Woererbuch	Magor	Skopje 2006
	22.2.	Additional literature				
		Ordinal number	Author	Title	Publisher	Year
		1.	DUDEN	Grammatik der deutschen Sprache	Mannheim/ Wien/Zürich: Dudenverlag (=Der Duden in 12 Bänden Bd. 4).	1995
		2.	Monika Reimann	Grundstufen-Grammatik für Deutsch als Fremdsprache	Max Hueber Verlag 2001	Leipzig 1979

Course Description – first cycle studies-Anex 3					
1.	Course title	**French language 1**			
2.	Course code	UGD100412			
3.	Programme of study	General Medicine			
4.	Organizer (unit/ institute, department)	University Goce Delcev Faculty of Medical science			
5.	Level of study (first, second, third cycle)	Integrated studies first and second cycle			
6.	Academic year / semester	First year / first semester	7.	Number of ECTS credits	4
8.	Instructor	Tole Belchev, Biljana Ivanovska, Snezana Kirova			
9.	Course enrolment prerequisites	Basic knowledge of French acquired in previous education			
10.	Course objectives (competences): Acquisition of skills for oral and written comprehension and expression in given situations. Capability for correct formulation of simple statements; Capability for communication in everyday situations; Knowledge of the most important milestones of the French civilization.				
11.	Course contents: **Grammar:** Mastering the basic rules of pronunciation (dropping vowels, phonetic bonding, adding consonants.) Verb groups and their variations in the formation of the Present Tense. Common and proper nouns, gender and number of nouns. Definite and indefinite article, partitive article, article omission, connecting pronouns with propositions. Personal pronouns, use of long pronominal forms, bonding pronouns with propositions. Gender and number of adjectives, their place in relation to the noun. Descriptive, demonstrative, possessive, interrogative, exclamative adjectives. Cardinal and ordinal numbers. Imperative and conditional forms. Formation of negation. Types of interrogative sentences. **Vocabulary:** Description of personalities, professions, hobbies, food, housing ...				

	Culture and Civilization of France: regions, holidays, cultural landmarks.			
12.	Course Methodology: Seminars, interactive methods: group work, lectures, homework, papers, discussions, debates, cooperative learning techniques, individual tasks, simulation for extracurricular educational activities, independent study.			
13.	Total amount of available time:		4 ECTS x 30 h = 120 hours	
14.	Time allocation:		0+0+30+30 +30 = 120 hours	
15.	Instruction activities	15.1.	Lectures- theoretical classes	0
		15.2.	Practice (laboratory, auditory) seminar papers, team work	0
16.	Other activities	16.1.	Project assignments	30
		16.2.	Individual assignments	30
		16.3.	Homework	60
17.	Forms of assessment			
	17.1.	Mid-term tests		40
	17.2.	Seminar paper/project (presentation: oral and written)		10
	17.3.	Attendance and participation		20
	17.4.	Oral exam		30
18.	Grading system (points /grades)		to 50 points	5
			from 51 to 60 points	6
			from 61 to 70points	7
			from 71to 80 points	8
			from 81to 90 points	9
			from 91 to 100 points	10
19.	Signature and final exam		Cumulative score of 60% of all required activities (midterm tests, attendance and	

	prerequisites	seminar papers)
20.	Language of instruction	French and Macedonian
21.	Course evaluation	Self-evaluation

22.	Literature:					
	22.1.	Required literature				
		Ordinal number	Author	Title	Publisher	Year
		1.	Guy Capelle, Robert Menand	Taxi! 1 Méthode de français	Hachette	2002
		2.	Guy Capelle, Robert Menand	Taxi! 1 Méthode de français. Cahier d'exercices	Hachette	2002
		3.				
	22.2.	Supplementaryl literature				
		Ordinal number	Author	Title	Publisher	Year
		1.	АТАНАСОВ, ПОПОСКИ, КАЛАЈЛИЕВСКА)	*Француско - македонски речник*	Просветно дело	1992
		2.	ПОПОСКИ, АТАНАСОВ	*Македонско - француски речник*	Просветно дело	1992
		3.				

Annex No.3	Program of the Course - first/second/third cyclestudies				
1.	**Title of the Course**	**Russian language**			
2.	**Code**	UGD100612			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	first	**7.**	**Number of credits**	2
8.	**Professor (s)**	Snezana Kirova, Tole Belcev, Biljana Ivanovska			
9.	**Requirements for enrollment the Course**	Enrolled first year			
10.	**Purposes of the curriculum (competencies):** Ability associated with oralandwrittenexpression andcomprehensionofsimple, everydaysituations. The student will be able to make introductions, to give basic information about him/herself or other persons, to describe basic activities and to take part in basic everyday dialogues, to narrate stories,togiveandseekinformation, togreet, tocommunicateby telephone, todiscusstopicsof everyday life, todescribe theenvironmentin which they live, to talk about theirhabitsandinterestsas well asto learn thegrammaticalstructuresandcontents etc..				

11.	**Content of thecourse program:**Basic language features. Reading, writing, spelling rules. Learningthebasicgrammaticalterms: definiteandindefinitearticles, gender and number, descriptiveadjectives, demonstrative, possessive adjectives, cardinal numbers. Present tense andpast tense. Accusative case.Types of interrogative and negativesentences, seasons of the year. Shorteveryday dialogues and compositions, using the grammaticalstructuresand terminology they are familiar with.			
12.	**Learning methods:** – Seminars, interactive methods: group work,essays, homework, papers, discussions, debate, cooperative learningtechniques, individual tasks, extracurricularactivities, simulations,self-study.			
13.	**Total available time**		4 ECTS x 30 h = 120 hours	
14.	**Distribution of available time**		0+0+30+30 +30 = 120 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	
16.	**Other activities**	**16.1.**	**Project tasks**	**30 hours**
		16.2.	**Individual tasks**	**30 hours**

		16.3.	**Home learning**	**60 hours**
17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**		**10 points**
	17.3.	**Activity and participation**		**20 points**
18.	**Assessment Criteria(points /score)**		**up 50points**	**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.	**Signature requirement and passing the final exam**	60 % success from the final exam activity and the seminar paper.		
20.	**Language of teaching / study**	Macedonian language/ Russian language		
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**		

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Kathryn Szczepanska	*Russian – a self-teaching guide*	Wiley	2005
		2.				
		3.				

	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				
		2.	Kathryn Szczepanska	*Russian – a self-teaching guide*	Wiley	2005

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Anatomy 2**			
2.	**Code**	3MF100312			
3.	**Study Program**	General medicine			
4.	**Organizer of the study program (unit orinstitute, Faculty, department)**	Faculty of Medicine, Faculty of Medicine			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	second	**7.**	**Number of credits**	8
8.	**Professor (s)**	Prof. D-r Svetlana Jovevska, PhD			
9.	**Requirements for enrollment the Course**	Completed course in Anatomy 1			
10.	**Purposes of the curriculum (competencies):** Introduction to the anatomy of the chest, the abdomen and the pelvis, as well as the skeletotopic and holotopic relations of these organs in body cavities.				

11.	**Content of the course program:** Theoretical instruction 1. Chest walls, breast structure 2. Organs of the respiratory system 3. Organs of the bloodstream system 4. Abdominal wall - muscles, vascularization, innervation, relations 5. Organs in the abdominal cavity - peritoneum, esophagus, stomach 6. Organs in the abdominal cavity - large and small intestine 7. Liver, bile tract, pancreas 8. Spleen, kidney, adrenal gland, urinary tract 9. Pelvic cavity - walls, muscles, vascularization and innervation 10. Pelvic cavity - boundaries and structure; urinary tract 11. Female genital organs 12. Male genital organs Practical instruction 1. Chest - wall structure, division of the mediastinum, boundaries, composition, topography 2. Mediastinal organs - relations; structure and topography of the respiratory system 3. Structure of the bloodstream system and major blood vessels, topography and relations 4. Abdominal wall – structure, muscles, relations of the muscles and the organs, vascularization and innervation 5. Orientation in the abdominal cavity - peritoneum, esophagus, stomach, topography and relations 6. Topography of organs in the abdominal cavity- structure and orientation of the small and large intestine 7. Orientation patterns of liver, bile tract, pancreas 8. Orientation patterns of spleen, kidney, adrenal gland, urinary tract anatomy 9. Pelvic wall – structure, topographic relations of organs, pelvic organs 10. Pelvic cavity – urinary tract organs, relations with other organs, vascularization and innervation 11. Female genital organs -orientation, relations with other organs 12. Male genital organs - orientation, relations with other organs

12.	**Learning methods:** – Interactiveclasses, individualconsultationswithstudents			
13.	**Total available time**		7 ECTS x 30 h = 210 hours	
14.	**Distribution of available time**		45+45+15+25 +80 = 210 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	45 hours
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	45 hours
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**25 hours**
		16.3.	**Home learning**	**80 hours**
17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**		**10 points**
	17.3.	**Activity and participation**		**20 points**
18.	**Assessment Criteria (points**		**up 50points**	**5(five) (F)**

	/score)	**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.	**Signature requirement and passing the final exam**	60% achievement on all pre-exam activities, i.e. 42 points earned on midterm tests, seminar paper, attendance and participation	
20.	**Language o fteaching / study**	English	
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**	

22.	**Literature**					
		Required literature				
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.1.	1.	R. L. Drake	Anatomy	Springer	2006
		2.				
		3.				
		Additional literature				
		No.	Author	Title	Publisher	Year
	22.2.	1.	Sinelnikov	Anatomski atlasi na covekot (I, II, III del)		2004
		2.	F.N. Netter	Atlas of human anatomy	Willey	2008
		3.				

Annex No.3	Program of the Course - first/second/third cyclestudies				
1.	**Title of the Course**	**Histology and Embryology 1**			
2.	**Code**	3MF103912			
3.	**Study Program**	General medicine			
4.	**Organizer of the study program (unit orinstitute, Faculty, department)**	University Goce Delcev Faculty of Department of Histology			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	second semester	**7.**	**Number of credits**	7
8.	**Professor (s)**	Prof. Dr Mirjana Kaeva Pejkovska			
9.	**Requirements for enrollment the Course**	enrolled first year			
10.	**Purposes of the curriculum(competencies):** • students learn about the construction of all structural components of the cell, knowing their structure • to recognize the obvious morphological changes that occur during the process of mitosis, meiosis and cell apoptosis • to learn the cell as a functional whole, studying the function of individual cell organelles and systems, as well as interaction with the environment of the cell. • to understand the metabolic processes, cellular processes information and				

	control mechanisms that allow normal physiological functioning.	
11.	**Content of the course program:** • The basic structure and physiology of prokaryotic cell and eukaryotic cell • Morphological characteristics of the plasmalemma, glikocaliks, cytosol. • Morphological features of cell organelles and the nucleus • Morphological characteristics of cells in mitosis, meiosis, and the physiological aging and death. • Morphological characteristics of various types of cells in the human body. • Function of the cell and its surroundings with her behavior (mortility and communication with the environment and with other cells) • Function of cell physiological systems • Function of the nucleus and cell organelles • Production processes in the cell, the synthesis of nucleic acids, proteins, amino acids and their regulation. • Cellular processes information • Cellular replication and development of body • Specialized cellular systems.	
12.	**Learning methods:** Theory: Interactive (lectures in large group discussions and engaging students) Multimedia instruction, interactive teaching, E-learning, Constant Contact on-line with students, Individual consultation with students and consultation in groups (face to face); Practical teaching: exercises and other forms of small-group work, Seminar work.	
13.	**Total available time**	7 ECTS x 30 h = 210 hours
14.	**Distribution of available time**	45+45+15+15 +90 = 210 hours

15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching, e-teaching**	45 hours
		15.2.	**theoretical and practical exercises, e-exams, preparation of independent seminar work**	45 hours
16.	**Other activities**	**16.1.**	**Project tasks**	**15 Hours**
		16.2.	**Individual tasks**	**15 Hours**
		16.3.	**Home learning**	**90 Hours**

17.	**Method of assessment:**The final score is calculated as the sum of all study activities. Visit the lectures are evaluated with maximum 10 points, while visiting the exercises are evaluated with 10 points. Two colloquia are provided and each brings 20 points (2h20 = 40). The highest predicted score is obtained by winning a maximum of 100 points. Requirement to student may appear on the final exam is to have previously passed both colloquia and has passed the practical exam. If a student does not pass the planned colloquia provided during the semester, take complete final exam which involved re-examination of the colloquuia, before entering a final exam.		
	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**

18.	**Assessment Criteria (points /score)**	**up 50points**	**5(five) (F4)**
		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.	**Signature requirement and passing the final exam**	**Requirement for signature and passing the final exam Collected 42 points from all activities**
20.	**Language of teaching / study**	**English**
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	**Bozhinovska L., L. Milenkova Kostovska N.**	**Morphology and physiology of cell**	**Faculty of Medicine Skopje**	**2006**
		2.	**Louise Junkvera**	**Basic Histology: Text And Atlas**		**2005**
		3.				
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				
		2.				
		3.				

Annex No.3	Program of the Course - first cycle studies			
1.	**Title of the Course**	**Introduction to Clinical Practice**		
2.	**Code**			
3.	**Study Program**	General Medicine		
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences		
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle		
6.	**Academic year / semester**	Second semester	**7.**	**Number of credits** 4
8.	**Professor (s)**	Doc. Marija Vavlukis, MD, PhD		
9.	**Requirements for enrollment the Course**	enrolled first year		
10.	**Purposes of the curriculum (competencies):** Introducing the students with the rules of professional communication with patients, colleagues and other medical and paramedical personnel, ethical principles in medicine, history of disease, medical documentation and legal aspects of the health care system. Students are trained in a professional and ethical approach to patients from different social and medical categories. Basic principles of professional communication, errors in communication,			

	nonverbal communication, communication by different social groups, the disabled and psychiatric patients, communication of diagnosis, ethical decision making, quality of life of the patient. Medical documentation. Legal aspects. History of disease and basic symptoms of disease.
11.	**Content of the course program:** Theory: 1.Basic principles of professional communication , introduction to the basic principles of professional communication. 2. Basic types of professional communication , doctor-patient communication , doctor - doctor , doctor - other health workers. 3. Communication error , an error in communication with the patient . Professional bonton. 4. Nonverbal communication , Importance of nonverbal communication of doctor with patient. 5. Communication with various social groups , communication of the doctor with: pre-school and school children , adolescents , the elderly and pregnant women . 6. Communication with disabled, physician communication with persons with impaired hearing, vision and other disabilities. 7. Communication with psychiatric patients , specific communication with patients with various psychiatric disorders. 8. Communication of diagnosis, telling of diagnosis and its acceptance. Behavior of the patient, family and physician. 9. Ethical decision making , ethical decision making , consent for surgery and other medical interventions. 10. Quality of life. Impact of disease on quality of life in patients.

	11. Medical documentation, introduction to current medical documentation. 12. Legal Aspects of Health Care. Legal aspects, rules and regulations governing health care. Practical instruction: 1. History of disease, Introduction to the history of disease. 2. History, interview of the patient and collecting information about the disease. 3. Main symptoms and signs, basic symptoms and signs of diseases of the cardiovascular, digestive, respiratory, urinary , endocrine and locomotory system . 4. Learning the basic principles of professional communication. 5. Introduction to clinical work with patients suffering from cardiovascular diseases. 6. Introduction to clinical work with patients suffering from respiratory diseases. 7. Introduction to clinical work with patients suffering from gastrointestinal diseases. 8. Introduction to clinical work with patients suffering from locomotor disorders. 9. Introduction to clinical work with patients suffering from endocrine diseases. 10. Introduction to clinical work with patients suffering from urinary diseases. 11. Introduction to clinical work in gynecology and obstetric patients. 12. Introduction to clinical work with sick children.			
12.	**Learning methods:** Lectures, group discussions methods, auditory and clinical exercises, individual assignments, seminar papers, presentation of a scientific work.			
13.	**Total available time**		4 ECTS x 30 h = 120 hours	
14.	**Distribution of available time**		30+30+15+15 +30 = 120 hours	
15.	**Forms of teaching /**	**15.1.**	**Lectures / theoretical - contact teaching,**	30 h

	learning activities		**e-teaching**	
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	30 h
16.	**Other activities**	**16.1.**	**Project tasks**	15 hours
		16.2.	**Individual tasks**	15 hours
		16.3.	**Home learning**	30 hours

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**

18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	At least 42 points acquired.	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	Self-evaluation	

22.	Literature					
	22.1.	Required literature				
		No.	Author	Title	Publisher	Year
		1.		Authorized Lectures		
		2.	Acad. Prof. Dr. Vladimir Serafimovski et al.	Internal propedeutics	Skopje	2003
		3.	Prof. Dr. Karposh Boškovski	Ethics		2002
	22.2.	Additional literature				
		No.	Author	Title	Publisher	Year
		1.				
		2.				
		3.				

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Human genetics**			
2.	**Code**				
3.	**Study Program**	General medicine			
4.	**Organizer of the study program(unit or institute, Faculty, department)**	University Goce Delcev Faculty of medical science			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	second	**7.**	**Number of credits**	4
8.	**Professor (s)**	Ass. Prof. Darko Bosnakovski			
9.	**Requirements for enrollment the Course**	Enrolled first year			
10.	**Purposes of the curriculum(competencies):** Introduction to the basics of human genetics				
11.	**Content of the course program:** The content of the curriculum: 1. Cytological basis of heredity. Morphology and physiology of the cell. Organization of DNA in chromosomes. 2. DNA, iRNA, rRNA, tRNA, transcription, translation, replication of the DNA.				

	3. Inheritance of properties-principles, gene interaction; Genes- structure and function genome, genotype, genetic code, alleles, and gene expression. 4. Structure and function of the chromosome. Mitosis and meiosis. 5. Autosomal, recessive inheritance, X linked inheritance, intermediate and codominant inheritance. 6. Numerical chromosomal aberrations: aneuploidy, heteroploidy, monosomy, nullisomy, trisomy. 7. Structural aberration: deletions, duplications, translocations, inversions. 8. Mutations. Mutagenic factors. 9. Autosomal and X-linked genetic diseases. 10. Genetic basis of malignancy (cancer). 11. Basic molecular biology and cytogenetic techniques (Polymerase chain reaction (PCR), RT-PCT, qPCR, Fluorescence in situ hybridization (FISH), western blot, southern blot, immunostaining, ELISA DNA sequencing, RNAi, microarray) 12. Prenataldiagnosisofgeneticdisease: noninvasiveandinvasivemethods. Genetic engineering.			
12.	**Learning methods:** Lectures,exercises,seminars research and practical activities			
13.	**Total available time**		4 ECTS x 30 h = 120 hours	
14.	**Distribution of available time**		30+30+15+15 +30 = 120 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	30 hours
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	30 hours

16.	**Other activities**	**16.1.**	**Project tasks**	15 hours
		16.2.	**Individual tasks**	15 hours
		16.3.	**Home learning**	30 hours

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**

18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	Cumulative score of 60% of all required activities (midterm tests, attendance and seminar papers)	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	Self-evaluation	

22.	**Literature**

	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Essentials of Genetics	Klug, Cummings and Spencer	Benjamin Cummings	2012
		2.				
		3.				

Program of the Course – first cycle studies					
1.	Course title	**Medical Psychology**			
2.	Code				
3.	Study programme	General Medicine			
4.	Organizer of the study programme (unit/ institute, department)	Faculty of Medical Science, Goce Delcev University, Stip			
5.	Level of study (first, second, third cycle)	Integrated studies first and second cycle			
6.	Academic year / semester	second semester	7.	Number of ECTS credits	4
8.	Professor	Prof. Lence Mlloseva, Ph.D			
9.	Preconditions for course enrollment	Enrolled first year			
10.	Goals of the syllabus (competences): To gain knowledge and understanding of the concepts, structure, psychological processes and personality changes through different developmental periods; knowledge and understanding of human behavior in medical settings, the person's reactions to illness. To become familiar with basic concepts and tasks of clinical psychology and their applicability in medical settigs(psychodiagnostic assessment, counseling and psychotherapy, research approaches and applications of research in classifying, diagnosing and treating of mental disorders). To become familiar with biopsychosocial model of health, psychological aspects of somatic diseases, and some of the most common mental disorders; assessment of different approaches to diagnosis and treatment and understanding of the link of these different approaches to their potential impact on patients. Understand the disease in its triple dimension, biological, psychological and social, and become familiar with the modern approach of some frequent psychosomatic diseases (e.g. cardiovascular, pulmonary, allergic). To become acquainted with current research questions pertaining to different areas of medical psychology. To gain knowledge and methods for maintaining an promoting mental health and well being . To develop communication skills (doctor/patient). Learn about doctor-patient communication and its importance in improving adherence to recommended health behaviors. To gain exposure to particularly innovative methods and approaches used in medical psychology research.				

11.	Content of the syllabus: • ***Introduction to Medical Psychology*** - Definition of personality, mental processes and behavior . Theories of human development. Cognitive processes and development. Socio-emotional processes and development. • ***Applied Clinical psychology in medicine*** -Concept, definition, and historical emergence.Medical psychology: interference domain between medicine and psychosocial sciences. • ***Approaches to Clinical psychology*** (Psychodynamic approach; Cognitive-Behavioral approach; Phenomenological approach; Interpersonal approach; Biopsychosocial approaches; Call for integration in medicine). • ***Psycho diagnostic*** (Diagnosis , Assessment , Semi-Structured Clinical Interview, Observations, Formal Psychological Testing, Neuroimaging techniques). • ***Mental health and mental disorders across life-span cycle*** -Overview of mental disorders and clinical picture. -DSM-IV -TR(APA, 2000) andMKB-10/ICD- 10 (WHO,1997) diagnostic classification. • ***Treatment of mental disorders*** - Formal and informal forms of psychological help. - Research on clinical interventions. • ***Psychotherapy and Psychological Counseling*** -Different approach in psychotherapy and counseling (Psychodynamic therapy; Cognitive Behavioral approach;Humanistic approach; Systematic approach,; Integrative approach). ❖ **Related Fields/Subspecialties of Clinical Psychology (Health Psychology; Child Clinical Psychology; Clinical Neuropsychology, Forensic Psychology)**

- ***Health Psychology (Stress)***

  - Stress, health and illness . -Psychosomatic medicine.
  - Psychological aspects of somatic illness.
  - Psychoneuroimmunology, AIDS and cancer; Psycho-oncology; Psychological aspects of: chronic and terminal illness;cardiovascular disease; brain injury; brain stroke ; pregnancy.

- **Health Psychology *(Pain)***

  -General aspects of pain (types of pain, causes of pain).Role of psychological factors in producing and enhancing pain. Psychological aspects and theories. Psychological interventions for pain suppression (hypnosis, relaxation, guided imagery).Incurable / chronic illness and pain.

- ***Child and adolescent clinical psychology***

  -Developmental psychopathology.
  -Evidence-based intervention and clinical assessment.
  -Treatment of mental disorders in childhood and adolescence.

- ***Clinical neuropsychology***

  -Basic principles in clinical neuropsychology.
  -Principles of neuropsychological assessments.
  -Neuropsychological assessment.
  -Neuropsychological approaches to psychopathology.

- ***Forensic Psychology***

  -Psychological autopsy and creating of psychological profile.
  -Ability to make decisions and forensic.

<u>Seminars</u>

-Biomedical vs. biopsychosocial model of health.

-Cognitions/health and illness(models that explain our beliefs about health and illness).

-Communication: verbal and non-verbal elements. Importance of concordance between verbal and non-verbal behavior. Specific of communication between doctor and patient: interaction to doctor's presumed roles, various kinds of anamnesis and their utility. Difficult patients. Identification of problematic behavior. Description of main personality disorders and their attitude towards doctors and medical institutions. Communication with difficult patients.(workshops).

-Psychological preparation for medical investigation and surgery interventions.

	-Psychological aspects of hospitalization. Child as a patient; Adult as a patient; Geriatric patient.(workshops) -Quality of life. -Death and dying. Coping with grief and loss.(workshops). -Presentation of case study.			
12.	Methods of study: seminars, interactive method: group work, reports, homework, seminar papers, discussion, debate, cooperative studying techniques, individual tasks, simulation of extra-curricular educational activities, individual studying			
13.	Total amount of available time:		4 ECTS x 30 h = 120 hours	
14.	Distribution of available time:		30+15+15+15 +45 = 120 hours	
15.	Forms of teaching activities	15.1.	Lectures- theoretical classes	30 h
		15.2.	Practice(laboratory, auditory) seminars, team work	15 h
16.	Other forms of activities	16.1.	Project tasks	15 h
		16.2.	Individual tasks	15 h
		16.3.	Homework	45 h
17.	Forms of assessment			
	17.1.	Tests		40
	17.2.	Seminar paper/project (presentation: oral and written)		10
	17.3.	Activity and participation		20
	17.4.	Oral exam		30
18.	Criteria for assessment (points /grade)		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)

19.	Condition for getting a signature and taking the final exam	60% success from all pre-exam activities or 42 points from the mid-term tests and the seminar paper as well as attendance and participation in class
20.	Language in which the classes are conducted	English
21.	Method of monitoring the quality of instruction	Self-evaluation

22.	Literature:					
	22.1.	Compulsory literature				
		Ordinal number	Author	Title	Publisher	Year
		1.	Nietzel, M.T., Bernstein, D.A. & Milich, R.	*Uvod u kliničku psihologiju*	Jastrerbarsko: Naklada Slap	2002
		2.	Hunter, Christine M., Hunter, Christopher L. & Kessler, Rodger (Eds.)	*Handbook of clinical psychology in medical settings*	New York: Springer Pub. Comp.	2012
		3.	Butcher, J.N,Mineka,S., & Hooley, J.M	*Abnormal Psychology*	Pearson	2013
		4.	Ogden,J.	*Health Psychology*	New York: McGraw-Hill Education	2004
	22.2.	Additional literature				
		No.	Author	Title	Publisher	Year

Appendix No. 3	**Program of the Course - first cycle studies**				
1.	**Title of the Course**	**Computer Science**			
2.	**Code**	3FI110112			
3.	**Study program**	General Medicine			
4.	**Organizer of the study program (unit orinstitute, Faculty, department)**	University “Goce Delcev” Faculty of Computer Science			
5.	**Cycle (first, second, or third study cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	first	7.	**Number of credits**	6
8.	**Professor (s)**	Ass. Professor Dr. Zoran Zdravev			
9.	**Requirements for enrollment the Course**	Enrolled first year			
10.	**Purposes of the curriculum (competencies):** - Adopting the basic concepts of computer science and concepts for using computers for communication, research and office work				
11.	**Contents of the course program:** - Introduction to computer science: algorithms, abstraction, history, - Computer hardware: introduction, types, architecture of computer systems, Murau law - Computer hardware: Peripherals, Computer Memory, digital identification; - Computer software: applicative software, open source software licenses; - Computer software: system software, programming languages; - Computer software: web services, online document storage and editing systems, - Computer networks: LAN, MAN, WAN, topologies, applications that run on network components, connectivity; - Computer networks: Internet, intranet, extranet, Internet services; - Computer security: a concept, a security risk, malicious software, unauthorized access, cryptography; - Information systems: introduction, types, ERP, CRM, HR, SCM; - Content Management Systems CMS: DMS, DAMS, WCM, ECP, ERS; - Databases: fundamentals, types, use				

12.	**Learning methods:** Lectures, Laboratory exercises, e-learning, individual and team projects,consultations.			
13.	**Total available time**		4 ECTS x 30 h = 120 hours	
14.	**Distribution of available time**		30+15+15+10 +50 = 120 hours	
15.	**Forms of teaching / learning activities**	15.1.	**lectures / theoretical - contact teaching, e-teaching**	30 h
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	15 h
16.	**Other forms of studying activities**	16.1.	**Project tasks**	15 h
		16.2.	**Individual tasks**	10 h
		16.3.	**Home learning**	50 h
17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		70 points
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**		10 points
	17.3.	**Activity and participation**		20 points
18.	**Assessment Criteria (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.	**Signature requirement and passing the final exam**	60% of term activities or minimum 42 points from 2 midterm exams, project activities and attending to lectures and discussions	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	Self-evaluation	
22	**Literature**		
	Zoran Zdravev, Gorgi Dimov, Vladan Andonovic, Silvana Zezova	Computer Science textbook, UGD 2013	

Annex No.3	**Program of the Course - first cycle studies**				
1.	**Title of the Course**	**Physiology 1**			
2.	**Code**	3MF103512			
3.	**Study Program**	General medicine			
4.	**Organizer of the study program** **(unit or institute, Faculty, department)**	University “Goce Delcev” Faculty of medical sciences Department of general medicine			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	third semester	**7.**	**Number of credits**	7
8.	**Professor (s)**	Icko K. Gjorgoski			
9.	**Requirements for enrollment the Course**	Enrolled second year			
10.	**Purposes of the curriculum (competencies):** The students should get knowledgeabout the fundamental principles in the field of human physiology. They should get familiar with the basic characteristics and mechanisms of body functions in human.				
11.	**Contents of the study program:** The importance of physiology as a biological science (1); cellular physiology (1); Muscle physiology (1); Fundamentals of cardiovascular physiology: heart physiology (1), vascular physiology (1), microcirculation (1); Blood as an internal environment (2);				

	Respiratory physiology(2), Neurophysiology (2)			
12.	**Learning methods:** lectures, tutorials, home learning,preparation of seminar work,practical course (demonstrative, individual work or work in groups)			
13.	**Total available time**		7 ECTS x 30 h = 210 hours	
14.	**Distribution of available time**		45+45+15+15 +90 = 210 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	45 h
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	45 h
16.	**Other forms of activities**	**16.1.**	**Project tasks**	**15 h**
		16.2.	**Individual tasks**	**15 h**
		16.3.	**Home learning**	**90 h**
17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**		**10 points**
	17.3.	**Activity and participation**		**20 points**
18.	**Assessment Criteria (points /score)**		**up 60points**	**5(five) (F)**
			61 to 68 points	**6(six) (E)**
			69 to 76 points	**7 (seven) (D)**

		77 to 84 points	**8 (eight) (C)**
		85 to 92 points	**9 (nine) (B)**
		93 to 100 points	**10 (ten) (A)**
19.	**Signature requirement and passing the final exam**	Realized activities 17.2. and 17.3.	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	Self-evaluation	

22. Literature

22.1. Required literature

No.	Author	Title	Publisher	Year
1.				
2.	Guyton, A.C. and Hall, J.E	Medical physiology	Saunders company	2008
3.	Boron, F.W and Boulpaep,E.L	Medical physiology	Elsevier sanders	2005

22.2. Additional literature

No.	Author	Title	Publisher	Year
1.	Dimovska, J and Gjorgoski, I	Neuroednocrine physiology	Faculty of natural sciences, Skopje	2005

Annex No.3	**Program of the Course - first cycle studies**				
1.	**Title of the Course**	**Anatomy 3**			
2.	**Code**	3MF100412			
3.	**Study Program**	General medicine			
4.	**Organizer of the study program(unit orinstitute, Faculty, department)**	Faculty of Medical Sciences, Goce Delcev University-Stip			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	forth	**7.**	**Number of credits**	7
8.	**Professor (s)**	Prof. D-r Svetlana Jovevska, PhD			
9.	**Requirements for enrollment the Course**	Completed course in Anatomy 2			
10.	**Purposes of the curriculum(competencies):** Introduction to the anatomy of the head and neck, the organs in the head and neck, the central nervous system and their interconnections.				
11.	**Content of the course program:** <u>Theoretical instruction</u>				

	1. Arteries of the head and neck 2. Venous and lymphatic vessels in the head and neck 3. Cranial nerves – number, nomenclature and relations 4. Cranial nerves - innervation areas 5. Organs in the head and neck - topography and relations 6. Endocrine glands 7. Organs of the digestive system in the head and neck 8. Organs of the respiratory system in the head and neck 9. Sensory organs, eyes and ears 10. Nervous system, structure, types of nerve fibers, division of the nervous system, ventricular system 11. Spinal cord, hindbrain (rhombencephalon), midbrain (mesencephalon) 12. Interbrain (diencephalon), cerebrum (telencephalon), brain membranes <u>Practical instruction</u> 1. Vascularization of the head and neck 2. Venous, lymphatic system of the head and neck 3. Cranial and spinal nerves 4. Mouth cavity 5. Organs of the digestive system located in the head and neck 6. Organs of the respiratory system located in the head and neck 7. Nasal cavity - anatomical parts, structure, function 8. Endocrine glands-topography, relations 9. Eye - anatomy, proportion, anatomy of orbit 10. Ear - anatomy, relations with other organs 11. Sense organs of taste, smell, touch and balance 12. Autonomic nervous system - anatomical division, function

12.	**Learning methods:** – Interactive classes, individual consultations with students			
13.	**Total available time**		7 ECTS x 30 h = 210 hours	
14.	**Distribution of available time**		45+45+15+15 +90 = 210 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	45 hours
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	45 hours
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**15 hours**
		16.3.	**Home learning**	**90 hours**
17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**		**10 points**
	17.3.	**Activity and participation**		**20 points**

18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	60% achievement on all pre-exam activities, i.e. 42 points earned on midterm tests, seminar paper, attendance and participation	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**	

22. Literature

22.1. Required literature

No.	Author	Title	Publisher	Year
1.	A. Kargovska-Klisarova, J. Josifov	Anatomy of human	Prosvetno delo	**2004**
2.				
3.				

22.2. Additional literature

No.	Author	Title	Publisher	Year
1.	Sinelnikov	AnatomicalAtlas ofman(I, II, IIIpart)		
2.	F.N. Netter	Atlas of human anatomy		

		3.				

Annex No.3	Program of the Course - first/second/third cyclestudies

1.	**Title of the Course**	**Histology and Embryology 2.**			
2.	**Code**	3MF104012			
3.	**Study Program**	General medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Department of			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	Third semester	**7.**	**Number of credits**	5
8.	**Professor (s)**	Prof. Dr Mirjana Kaeva Pejkovska			
9.	**Requirements for enrollment the Course**	Passed Histology and Embryology 1.			
10.	**Purposes of the curriculum (competencies):** Empower students to recognize all the elements and structures of the body of histological preparations To introduce and observed: - The specific combination of tissues involved in the construction of every organ; - Structural features of the component that holds the basic function of the body - Other tissues involved in the construction and to elaborate their structure that				

	serves the function in the organism To explain the origin and the embryonic development of each organic system and understand where disorder may occur in the normal development of the system and any congenital anomalies may result.
11.	**Content of the course program:** 1.Histological construction, embryonic development and the occurrence of congenital anomalies of the respiratory system. 2. Histological construction, embryonic development and the occurrence of congenital anomalies of the endocrine system 3. Histological construction embryonic development and the occurrence of congenital anomalies of digestive system 4. Histological construction embryonic development and the occurrence of congenital anomalies of the liver and pancreas 5. Histological construction embryonic development and the occurrence of congenital anomalies of the cardiovascular system 6. Histological construction embryonic development and the occurrence of congenital anomalies of the male genital system 7.Histological construction embryonic development and the occurrence of congenital anomalies of the female genital system 8. Histological construction embryonic development and the occurrence of congenital anomalies of the urinary system 9. Histological construction embryonic development and the occurrence of congenital anomalies of the central nervous system 10.Histological construction embryonic development and the occurrence of congenital anomalies of skin and skin adnexis, breast 11. Histological construction embryonic development and the occurrence of congenital anomalies of the organ of sight 12. Histological construction embryonic development and the occurrence of congenital anomalies of the body hearing and balance

12.	**Learning methods: Learning methods:** Theory: Interactive (lectures in large group discussions and engaging students) Multimedia instruction, interactive teaching, E-learning, Constant Contact on-line with students, Individual consultation with students and consultation in groups (face to face); Practical teaching: exercises and other forms of small-group work, Seminar work.			
13.	**Total available time**		5 ECTS x 30 h = 150 hours	
14.	**Distribution of available time**		30+30+15+15 +60 = 150 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	30 hours
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	30 hours
16.	**Other activities**	**16.1.**	**Project tasks**	**15 Hours**
		16.2.	**Individual tasks**	**15 Hours**
		16.3.	**Home learning**	**60 Hours**
17.	**Method of assessment:**The final score is calculated as the sum of all study activities. Visit the lectures are evaluated with maximum 10 points, while visiting the exercises are evaluated with 10 points. Two colloquia are provided and each brings 20 points (2x20 = 40). The highest predicted score is obtained by winning a maximum of 100 points. Requirement to student may appear on the final exam is to have previously passed both colloquia and has passed the practical exam. If a student does not pass the planned colloquia provided during the semester, take complete final exam which involved re-examination of the colloquuia, before entering a final exam.			
	17.1.	**Tests / oral exams**		**70 points**

	17.2.	Seminars (paper/project - presentation: written and/or oral)	10 points
	17.3.	Activity and participation	20 points
18.	Assessment Criteria (points /score)	up 50points	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.	Signature requirement and passing the final exam	Requirement for signature and passing the final exam Collected 42 points from all activities	
20.	Language of teaching / study	English	
21.	Method of monitoring the quality of teaching	Self-evaluation	

22.	Literature					
	22.1.	Required literature				
		No.	Author	Title	Publisher	Year
		1.				
		2.	Louise Junkvera	Basic Histology: Text And Atlas	Springer	2005
		3.				
	22.2.	Additional literature				
		No.	Author	Title	Publisher	Year

		1.				
		2.				
		3.				

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Biochemistry 1**			
2.	**Code**	3MF101712			
3.	**Study Program**	General medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	Faculty of Medical Sciences Goce Delcev University - Stip			
5.	**Cycle (first, second and third cycle)**	Integreted studies first and second cycle			
6.	**Academic year / semester**	third semester	**7.**	**Number of credits**	5
8.	**Professor (s)**	Assistant Professor Tatjana Ruskovska, PhD			
9.	**Requirements for enrollment the Course**	Enrolled second year			
10.	**Purposes ofthe curriculum (competencies):** Learning about the chemical composition of a healthy human organism.				
11.	**Content of the course program:** Theoretical study units: 1. Definition of biochemistry. 2. Water, electrolytes and acid-base balance.				

	3. Amino acids: General properties, classification and their role in the organism. 4. Peptides and Proteins: General properties, classification and their role in the organism. 5. Lipids 1: General properties, classification and their role in the organism. 6. Lipids 2: General properties, classification and their role in the organism. 7. Monosaccharides: General properties, classification and their role in the organism. 8. Oligosaccharides and polysaccharides: General properties, classification and their role in the organism. 9. Nucleic acids. 10. Enzymes: General properties, classification and their role in the organism. 11. Enzymes: Mechanism and kinetics of the enzymatic reactions. 12. Vitamines: Classification, chemical structure and function. <u>Practical study units:</u> 1. Introduction to the biochemical laboratory analyses. 2. pH, acid-base balance, and systems for control of the acid-base balance. 3. Structure and classification of the proteins, and investigation of their general properties. 4. Identification of the proteins based on colored reactions. 5. Classification, structure and role of the lipids, and investigation of their properties. 6. Isoprenoid lipids- steroids and carotenoids. 7. Structure, classification and role of the carbohydrates. Investigation of their general properties. 8. Investigation of the chemical properties and composition of the oligosaccharides and polysaccharides. 9. Classification and function of the enzymes in the organism and investigation of their general properties. 10. Mechanism and kinetics of the enzymatic reactions. 11. Identification of some hydrosoluble and liposoluble vitamins. 12. Final experiment
	<u>Practical tuition</u> 1. Introduction to the biochemical laboratory analyses. 2. pH, acid-base balance, and systems for control ofthe acid-base

<table>
<tr><td></td><td colspan="4">balance.
3. Structure and classification of the proteins, and investigation of their general properties.
4. Identification of the proteins based on colored reactions.
5. Classification, structure androle of the lipids, and investigation of their properties.
6. Isoprenoid lipids- steroids and carotenoids.
7. Structure, classification and role of the carbohydrates. Investigation of their general properties.
8. Investigation of the chemical properties and composition of the oligosaccharides and polysaccharides.
9. Classification and function of the enzymes in the organism and investigation of their general properties.
10. Mechanism and kinetics of the enzymatic reactions.
11. Identification of some hydrosoluble and liposoluble vitamins.
12. Final experiment</td></tr>
<tr><td>12.</td><td colspan="4">Learning methods:

<u>Theoretical tuition</u>

- Interactive teaching: Lectures in large group and discussions with students.
- Multimedia teaching.
- E-learning.
- Individual consultations with students and consultations in groups.

<u>Practical tuition</u>

- Practical laboratory exercises in small groups.
- Theoretical discussion about experiments.
- Final practical work.</td></tr>
<tr><td>13.</td><td colspan="2">Total available time</td><td colspan="2">5 ECTS x 30 h = 150 hours</td></tr>
<tr><td>14.</td><td colspan="2">Distribution of available time</td><td colspan="2">30+30+15+15 +60 = 150 hours</td></tr>
<tr><td>15.</td><td>Forms of teaching / learning activities</td><td>15.1.</td><td>lectures / theoretical - contact teaching,
e-teaching</td><td>30</td></tr>
</table>

		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	30
16.	**Other forms of activities**	**16.1.**	**Project tasks**	15 hours
		16.2.	**Individual tasks**	15 hours
		16.3.	**Home learning**	60 hours
17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		70 points
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**		10 points
	17.3.	**Activity and participation**		20 points
18.	**Assessment Criteria (points /score)**		**up 50points**	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.	**Signature requirement and passing the final exam**	60% achievement on all pre-exam activities, i.e. 42 points earned on midterm tests, seminar paper, attendance and participation		
20.	**Language of teaching / study**	English		
21.	**Method of monitoring the quality of teaching**	Self-evaluation		

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Dave Nelson and Nike Cox	Lehninger, Principles of Biochemistry, 5th edition	"Mikena" Bitola, Translated book – Project of the Government - Republic of Macedonia	2011
		2.				
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**

Annex No.3	**Program of the Course - first cycle studies**				
1.	**Title of the Course**	**Bistatistics and medical informatics**			
2.	**Code**	**3MF120012**			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	third	**7.**	**Number of credits**	4
8.	**Professor (s)**	Prof.Milka Zdravkovska, MD, PhD			
9.	**Requirements for enrollment the Course**	enrolled second year			
10.	**Purposes ofthe curriculum (competencies):** Acquiring knowledge about the basics of medical biostatistics - ways of collecting data, grouping the data series and their statistical table and graph. Learning basic parametric and nonparametric tests, demographic and vital statistics.				
11.	The content of the curriculum :				

	Theoretical study units : 1. Concept and development of bistatistics ; Statistical table , sample units, types and properties of statistics , statistical series (atributiv, numerical, spatial, temporal) 2. Methods of data collection : census, registration and preparation of reports, method of questionnaire - a survey . 3.Tabular and graphical presentation of statistical series. Analysis of the structure of the series atributivi tokens (ie, proportions , rates and indices) . 4. Analysis of the structure of the series with numerical characteristics (mean, median , mode) . 5. Measures of variability : mean deviation , variance and standard deviation , coefficient of variation . 6. Hypotheses / testing of hypotheses , analysis of statistical relationships in series with atributiv marks (2 test and contingency coefficient) . 7. Analysis of relationships in series with numerical characters (Pearson- correlation coefficient t , Spearman- t rank correlation coefficient and multiple correlation) . 8. Method of sampling , estimation of parameters of the sample (parameter π and the parameter μ) 9. Testing the significance of differences between the two environments and arithmetic between two proportions (Student- t t- test for independent and dependent samples) . 10. Examination of the dynamics of phenomena (trend , seasonal index) 11. Vital Statistics , Concepts and sources in demographic statistics. 12. Application of information technology in medicine . **Practical teaching units:**

	1. Plan for stastistic research. 2. Indices dynamics with constant and variable basis. 3rd Calculating the arithmetic mean in nongroup data, grouped in the interval group and the group without grouped interval. 4. Calculating the median and the mode nongrouped and grouped data. 5. Standard deviation in nongrouped and grouped data; Coefficient of variation. 6. Calculating the expected frequencies and □ 2 test. 7. Pearson-correlation coefficient of t in nongroup data. 8. Estimation of parameters of the sample (π parameter and the parameter μ) 9. Student-t t-test for two independent large samples and in two proportions. 10. Linear trend of time series (for odd and even number of years) Seasonal index. 11. Calculating birth rates, fertility, mortality, morbidity, natural population growth. 12. Presentation of the statistical program.	
12.	**Learning methods:** small group work, homework, practical work, project assignments, discussion.	
13.	**Total available time**	4 ECTS x 30 h = 120 hours
14.	**Distribution of available time**	30+30+15+15 +30 = 120 hours

15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	30 h
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	30 h
16.	**Other activities**	**16.1.**	**Project tasks**	15 h
		16.2.	**Individual tasks**	15 hours
		16.3.	**Home learning**	30 h

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**

18.	**Assessment Criteria(points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	Scored at least 42 points on all grounds (lectures, tutorials, colloquia, project task
20.	**Language of teaching / study**	English
21.	**Method ofmonitoringthe**	Self evaluation

	quality of teaching	

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				
		2.	**Jamie F.. Dzhekel, David L.. Katz, Joan J.. Elmore, Dorothea MJ Wilde**	**Epidemiology, Biostatistics and Preventive Medicine**	**Springer**	**2010**
		3.				
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**

Annex No.3	**Program of the Course - first cycle studies**				
1.	**Title of the Course**	**Anthropology**			
2.	**Code**				
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	Third semester	**7.**	**Number of credits**	2
8.	**Professor (s)**	Doc. Zoran Handziski, MD, PhD			
9.	**Requirements for enrollment the Course**	Verified first and second semester enrolled			
10.	**Purposes of the curriculum (competencies):** Introducing the students with all areas and disciplines of anthropology with the emphasis on physical anthropology.				
11.	**Content of the course program:** Theory:				

	1.The main dividing of anthropology 2. History of anthropology 3. The role of races in anthropology 4. Anthropometry 5. Physiological anthropometry 6. Functional anthropometry 7. Constitution 8. Nutritional anthropometry 9. Descriptive characteristics and index values of head 10. Anthropology of the skin			
12.	**Learning methods:** Interactive teaching in lectures and tutorials, practical exercises.			
13.	**Total available time**		2 ECTS x 30 h = 60 hours	
14.	**Distribution of available time**		30+0+15+5+10 = 60 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**Lectures / theoretical - contact teaching,** **e-teaching**	30 h
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	0 h
16.	**Other activities**	**16.1.**	**Project tasks**	15 hours
		16.2.	**Individual tasks**	5 hours
		16.3.	**Home learning**	10 hours

<table>
<tr><td rowspan="4">17.</td><td colspan="4">Method of assessment</td></tr>
<tr><td>17.1.</td><td colspan="2">Tests / oral exams</td><td>70 points</td></tr>
<tr><td>17.2.</td><td colspan="2">Seminars (paper/project - presentation: written and/or oral)</td><td>10 points</td></tr>
<tr><td>17.3.</td><td colspan="2">Activity and participation</td><td>20 points</td></tr>
<tr><td rowspan="6">18.</td><td colspan="2" rowspan="6">Assessment Criteria(points /score)</td><td>up 50points</td><td>5(five) (F)</td></tr>
<tr><td>51 to 60 points</td><td>6(six) (E)</td></tr>
<tr><td>61 to 70 points</td><td>7 (seven) (D)</td></tr>
<tr><td>71 to 80 points</td><td>8 (eight) (C)</td></tr>
<tr><td>81 to 90 points</td><td>9 (nine) (B)</td></tr>
<tr><td>91 to 100 points</td><td>10 (ten) (A)</td></tr>
<tr><td>19.</td><td colspan="2">Signature requirement and passing the final exam</td><td colspan="2">The method of assessment is based on the cumulation of points of lectures, tutorials, colloquia and seminar work;

• Colloquia are independent of each other, taking one is not a prerequisite for taking the other colloquium;

• The final exam is also not dependent on the colloquiums, they are not a requirement for passing the final exam, but the total number of points scored, which should not be less than 42 points;

• In case of insufficient number of points for passing the final exam, the professor can arrange additional colloquium or additional activity when there is sufficient number of candidates.</td></tr>
</table>

20.	**Language of teaching / study**	English
21.	**Method of monitoring the quality of teaching**	Supporting evaluation of students and self-evaluation.

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				
		2.	C. Levi-Strauss	Structural Anthropology	Springer	2008
		3.				
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				
		2.				
		3.				

Annex No.3	**Program of the Course - first cycle studies**	
1.	**Title of the Course**	**Organization of health care**
2.	**Code**	3MF121812
3.	**Study Program**	General Medicine

4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences Department of Public health and Health Care			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	third semester	**7.**	**Number of credits**	2
8.	**Professor (s)**	Prof. Gorgi Sumanov			
9.	**Requirements for enrollment the Course**	Enrolled third year			
10.	**Purposes of the curriculum (competencies):** This course enables students to gain general knowledge about the principles of organizaing the health care, types of planning, their development and evaluation.				
11.	**Content of the course program:** • Planning and development of health care • General principles for planning in the area of health • Types of planning in health care • Definition of priorities in development and planning decisions • Evaluation of the achievements in the planning of health care • Evaluation of the achievements in the planning of health care • Organization of health care and health care services • Levels of healthcare system -1 • Levels of healthcare system -2 • Health and social protection of elderly and mentally and physically challenged people				

	• Health and social protection of workers and agriculture workers • Human resources in health care			
12.	**Learning methods:** – Lectures, individual tasks, collaborative lectures, group discussions			
13.	**Total available time**	2 ECTS x 30 h = 60 hours		
14.	**Distribution of available time**	30+0+15+5+10 = 60 hours		
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	30 hours
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**5 hours**
		16.3.	**Home learning**	**10 hours**
17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**		**10 points**
	17.3.	**Activity and participation**		**20 points**
18.	**Assessment Criteria (points**	**up 50points**		**5(five) (F)**

	/score)	**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.	**Signature requirement and passing the final exam**	**Minimum 42 points**	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**	

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Gorgi Sumanov	**Authorised lectures**	University Goce Delcev Stip	**2012**
		2.				
		3.				
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	E. M. Spencer et al.	Organization Ethics in Health care	Willey	2003
		2.				
		3.				

Article Number 3	**Study program from the first cycle of studies**				
1.	Name of the subject	**Social Medicine**			
2.	Code				
3.	Study program	General Medicine			
4.	Organiser of the study program (unit i.e. institute, department)	Faculty of Medical Sciences Department of Public Health and Health Protection			
5.	Level (first, second, third cycle of studies)	Integrated studies first and second cycle			
6.	Academic year / Semester	Third semester	7.	Number of credits	3
8.	Associate Professor	Prof. D-r Gorgi Shumanov			
9.	Preconditions for enrolling in the subject	Enrolled second year			
10.	Aims of the study program (competencies): The purpose of the study isto acquaint studentswithbasicknowledgeofthesocialandmedical aspectsofthemostimportantdiseasesanddamage of the health of the population.				

<table>
<tr><td>11.</td><td colspan="4">The content of the study program:

<u>Theoretical study units:</u>

• Development ofsocialmedicineandhealth care
• Factorsaffectingthepublic health
• Methodologystudy ofhealth statusof the population
• Accessto observethe appearanceanddata collection
• Organizationof health care andhealth service
• Healthandsocial protectionofcertaingroupsof the population
• Features of acuteinfectious diseaseswithsocialmedical significance
• Characteristics of chronicmassnon-infectious diseases – I part
• Characteristics of chronicmassnon-infectious diseases – II part
• Characteristics ofthediseases of addictionand juvenile delinquency
• Principles and actionareasof health education
• Methods andtoolsinmedicaltraining and work
<u>Practical study units:</u>

• Health caresystems
• Methods and indicatorsforassessingthehealthstatusofthepopulation
• Types of statisticalforms
• International Statistical Classification of Diseases
• Health organizations
• Health workers andhealthassistants
• Health care
• Social medical significanceof acuteinfectious diseases
• Social medical significanceof chronic non-infectious diseases
• Health education
• Health promotion
• Methods ofhealth education</td></tr>
<tr><td>12.</td><td colspan="4">Teaching methods: Lectures, exercises, group discussionsmethods, individual assignments, seminar papers, presentation of scientific papers.</td></tr>
<tr><td>13.</td><td colspan="2">Total time available</td><td colspan="2">2 ECTS x 30 h = 60 hours</td></tr>
<tr><td>14.</td><td colspan="2">Allocation of the available time</td><td colspan="2">30+0+15+5+10 = 60 hours</td></tr>
<tr><td rowspan="2">15.</td><td rowspan="2">Forms of teaching activities</td><td>15.1.</td><td>Lectures- theoretical education</td><td>30 h</td></tr>
<tr><td>15.2.</td><td>Exercises (laboratory auditory), seminar papers, teamwork</td><td>0</td></tr>
<tr><td rowspan="2">16.</td><td rowspan="2">Other forms of activities</td><td>16.1.</td><td>Project assignments</td><td>15 hours</td></tr>
<tr><td>16.2.</td><td>Individual assignments</td><td>5 hours</td></tr>
</table>

		16.3.	Studying at home	**10 hours**
17.	Method of evaluation			
	17.1.	Tests and a final oral exam		70 points
	17.2.	Seminar paper/project (presentation: Written and oral)		10 points
	17.3.	Activity and participation		20 points
18.	Criteria for evaluating (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.	Signature requirement and taking the final exam	For a signature - presence of at least 7 (60%) lectures and 10 exercises; For the final exam - scored at least 42 points on all grounds;		
20.	Language ofteaching	English		
21.	Method of monitoring the quality of teaching	Self evaluation		

22.	Literature				
	Compulsory literature				
	No.	Author	Title	Publisher	Year
	22.1	1.	S. Sharma	Preventive and social medicine	Elsevier	2005

Annex No.3	

	Program of the Course - first cycle studies				
1.	**Title of the Course**	**Physiology 2**			
2.	**Code**	3MF103512			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program** **(unit or institute, Faculty, department)**	University “Goce Delchev” Faculty of medical sciences Department of general medicine			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	Fourth semester	**7.**	**Number of credits**	7
8.	**Professor (s)**	Prof. dr Icko K. Gjorgoski			
9.	**Requirements for enrollment the Course**	Enrolled second year			
10.	**Purposes ofthe curriculum (competencies):** The students should get knowledgeabout the fundamental principles in the field of human physiology. They should get familiar with the basic characteristics and mechanisms of body functions in human.				
11.	**Contents of the study program:** Sensory Physiology and special senses (2);Gastrointestinal physiology (2);Hepatobilliar physiology (1);Metabolic physiology(1);Renal physiology and excretion(2);Endocrinology (2);Reproductive physiology (2)				

12.	**Learning methods:** lectures, tutorials, home learning,preparation of seminar work,practical course (demonstrative, individual work or work in groups)			
13.	**Total available time**		7 EKTS x 30 h = 210 hours	
14.	**Distribution of available time**		45+45+15+15+90 = 210 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	45 h
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	45 h
16.	**Other forms of activities**	**16.1.**	**Project tasks**	15 h
		16.2.	**Individual tasks**	15 h
		16.3.	**Home learning**	**90 h**

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**

18.	**Assessment Criteria (points /score)**	**up 60points**	**5(five) (F)**
		61 to 68 points	**6(six) (E)**
		69 to 76 points	**7 (seven) (D)**
		77 to 84 points	**8 (eight) (C)**
		85 to 92 points	**9 (nine) (B)**

		93 to 100 points	**10 (ten) (A)**
19.	**Signature requirement and passing the final exam**	Realized activities 17.2. and 17.3.	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	Self-evaluation	

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				
		2.	Guyton, A.C. and Hall, J.E	Medical physiology	Saunders company	2008
		3.	Boron, F.W and Boulpaep,E.L	Medical physiology	Elsevier sanders	2005
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				

Annex No.3	**Program of the Course - firstcyclestudies**	
1.	**Title of the Course**	**Microbiology and Parasitology 1**
2.	**Code**	3MF101512
3.	**Study Program**	Medicine
4.	**Organizer of the study program (unit or institute,**	University “GoceDelcev”

	Faculty, department)	Faculty of Medical sciences Department of Microbiology			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	fourth	**7.**	**Number of credits**	6
8.	**Professor (s)**	Ass. prof. d-r VasoTaleski, MD, D-r Sc.			
9.	**Requirements for enrolment the Course**	Enrolled second year			
10.	**Purposes ofthe curriculum (competencies):** Basic aim of the course program is to introduce and enable students to acquire theoretical, practical knowledge, skills and competences in field of general microbiology				
11.	**Contents of the course program** 1. Introduction of history and development of microbiology science, most important inventions, significance of microorganisms. Classification of bacteria, taxonomic categories, nomenclature, size, shape and disposition of bacteria 2. Morphology and structure of bacterial cells: capsule, cell wall, cytoplasmic membrane, cytoplasm and cytoplasmic inclusions, fimbrae and pili, flagellum 3. Bacterial spores, bacterial movement. Conditions for growth and multiplication, growth phases, bacterial colonies 4. Chemical composition of bacteria, metabolism, mechanism of bacterial feeding, metabolism of energy: fermentation, respiration, photosynthesis 5. Metabolism of nucleic acids. DNA replication. Nucleic acids decomposition 6. Bacterial genetics. Bacterial variations: phenotype and genotype variations 7. Gene transfer: conjugation, transformation, transduction 8. Spreading of microorganisms. Ecology of microorganisms. Associations between microorganisms. Association between microorganisms and high live organisms. 9. Pathogenicity and virulence. Nonspecific and specific immunity in humans. Antigen-antibody reactions. Immunotherapy and immune-prophylaxis. 10. Sterilization and disinfection. Antibiotics and chemiotherapeutics. Antibiotics groups according mechanism of action. Microorganism's				

	resistance toward antibiotics. Side effects of chemiotherapeutics. 11. Infections and infective diseases. Microbiological aspects of hospital infections. 12. Morphology, structure, classification and multiplication of viruses, fungi and parasites **Contents of practical program** 1. Principles of safety work in microbiology laboratory 2. Sampling, packaging and delivering samples for microbiology testing 3. Microscope an microscopic examinations of microorganisms (light microscope, fluorescence microscope, electron microscope) 4. Staining of microorganisms (Gram, Giemsa, Ziehl-Neelsen, Cold staining of mycobacterium) 5. Culture media and bacterial cultivation 6. Identification of bacteria (classical biochemical reactions, automatic systems for identification 7. Antibiotic susceptibility testing of bacteria/antibiogram (classical diffusion and dilution methods, automatic systems, E-test) 8. Classical serologic reactions. Rapid tests 9. Immune-enzymes methods (ELISA, VIDAS) 10. Hemocultures 11. Sterilization 12. Disinfection			
12.	**Learning methods:** Methods of oral and visual learning/presentations and practical work in the lab.			
13.	**Total available time**		6 ECTS x 30 h = 180 hours	
14.	**Distribution of available time**		45+30+15+30+60 = 180 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	45 hours
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	30 hours
16.	**Other activities**	**16.1.**	**Project tasks**	15 hours
		16.2.	**Individual tasks**	30 hours

		16.3.	**Home learning**	60 hours
17.	**Method of assessment**			
	17.1.	**Tests**		40points
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**		10 points
	17.3.	**Activity and participation during lecturing**		10 points
	17.4	**Activity and participation during lab practical work**		10 points
18.	**Assessment Criteria(points /score)**		up 50points	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.	**Signature requirement and passing the final exam**	Requirements for signature: presence at lecturing and practical work. Requirementsfor final exam: at least 42 points from two colloquia, presence at lecturing, practical lab work and seminars (paper/project - presentation. Colloquia are not conditionally connected. For students with points over 37 and less than 42, professor could organize additional colloquium with maximum of 10 additional points		
20.	**Language of teaching / study**	English		
21.	**Method of monitoring the quality of teaching**	Student evaluation Self-evaluation		

22.	**Literature**

	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Greenwood D. et all.	Medical microbiology	Project of the Government of the Republic of Macedonia, for translation of vocational and scientific books	17-edition, 2006, Translated in 2011
		2.	Panovski N. et all. Guest / invited author: VasoTaleski	Medical microbiology - General part	Institute of Microbiology and parasitology, Medical faculty Skopje.	2011
		3.		-		
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Milena Petrovska et all.	Handbook on medical microbiology and parasitology	Institute of Microbiology and parasitology, Medical faculty Skopje,	5^{th} ed. 2010
		2.				
		3.				

Annex No.3	**Program of the Course - first cycle studies**				
1.	**Title of the Course**	**Biochemistry 2**			
2.	**Code**	3MF100912			
3.	**Study Program**	General medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	Faculty of Medical Sciences Goce Delcev University - Stip			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	fourth semester	**7.**	**Number of credits**	5
8.	**Professor (s)**	Assistant Professor Tatjana Ruskovska, PhD			
9.	**Requirements for enrollment the Course**	Enrolled second year			
10.	**Purposes of the curriculum (competencies):** Learning about the metabolic processes in the cell and the whole organism, and their regulation. Acquiring basic knowledge about research in cell biochemistry.				
	Content of the course program:				

	Theoretical tuition 1. Definition of metabolism. Anabolic and catabolic processes in healthy human organism. 2. Cofactors and high-energy compounds. 3. Metabolism of carbohydrates,part one. Glycolysis. 4. Metabolic transformation of the pyruvate. The cycle of three carboxylic acids. 5. Respiratory chain and oxidative phosphorylation. Energetic contribution of the metabolism of carbohydrates, 6. Metabolism of carbohydrates, part two. Glycogenolysis, glycogenesis,pentose-phosphate cycle, gluconeogenesis. 7. Metabolism of the lipids. Catabolism of the 3-acylglycerols. B-oxidation of fatty acids and energetic contribution.Ketogenesis. Biosynthesis of fatty acids, phospholipids and sterols. Prostaglandins. 8. Metabolism of the lipoproteins in the blood plasma. 9. Metabolism of the proteins. 10. Метаболизам of the amino acids. 11. Metabolism of the porphyrins. Metabolism of the nucleotides. 12. Photosynthesis. Practical tuition 1. Research in cell biochemistry and its specificity. 2. Basic procedures and techniques in biochemical research. 3. Hydrodynamic methods in cell biochemistry. 4. Application of the techniquesof electrophoresis in the biochemical research, part one. 5. Application of the techniquesof electrophoresis in the biochemical researches, part two. 6. Application of the chromatography techniques in the analysis of cell material. 7. Laboratory methods for investigation of mitochondrial respiration. 8. Glycolysis. 9. Pentose-phosphate cycle. 10. Metabolism of the lipids. 11. Photosynthesis. 12. Final experiment.

<table>
<tr><td>12.</td><td colspan="4">Learning methods:

<u>Theoretical tuition</u>

- Interactive teaching: Lectures in large group and discussions with students.
- Multimedia teaching.
- E-learning.
- Individual consultations with students and consultations in groups.

<u>Practical tuition</u>

- Practical laboratory exercises in small groups.
- Theoretical discussion about experiments.
- Final practical work.</td></tr>
<tr><td>13.</td><td colspan="2">Total available time</td><td colspan="2">5 ECTS x 30 h = 150 hours</td></tr>
<tr><td>14.</td><td colspan="2">Distribution of available time</td><td colspan="2">30+30+15+30+45 = 150 hours</td></tr>
<tr><td rowspan="2">15.</td><td rowspan="2">Forms of teaching / learning activities</td><td>15.1.</td><td>lectures / theoretical - contact teaching,
e-teaching</td><td>30</td></tr>
<tr><td>15.2.</td><td>theoretical and practical exercises,
e-exams, preparation of independent seminar work</td><td>30</td></tr>
<tr><td rowspan="3">16.</td><td rowspan="3">Other activities</td><td>16.1.</td><td>Project tasks</td><td>15</td></tr>
<tr><td>16.2.</td><td>Individual tasks</td><td>30</td></tr>
<tr><td>16.3.</td><td>Home learning</td><td>45</td></tr>
<tr><td rowspan="3">17.</td><td colspan="4">Method of assessment</td></tr>
<tr><td>17.1.</td><td colspan="2">Tests / oral exams</td><td>70 points</td></tr>
<tr><td>17.2.</td><td colspan="2">Seminars (paper/project - presentation: written</td><td>10 points</td></tr>
</table>

		and/or oral)	
	17.3.	**Activity and participation**	20 points
18.	**Assessment Criteria(points /score)**	**up 50points**	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.	**Signature requirement and passing the final exam**	60% achievement on all pre-exam activities, i.e. 42 points earned on midterm tests, seminar paper, attendance and participation	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	Self-evaluation	

22.	**Literature**					
		Required literature				
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.1.	1.	Dave Nelson and Nike Cox	Lehninger, Principles of Biochemistry, 5th edition	"Mikena" Bitola, Translated book – Project of the Government - Republic of	2011

					Macedonia	
		2.	Tatjana Ruskovska, Maja Jancovska, Galaba Naumova	Cell biochemistry – practical course	Authorized lectures	2012
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Immunology**			
2.	**Code**	3MF100712			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	Fourth semester	**7.**	**Number of credits**	4
8.	**Professor (s)**	Doc. Dejan Trajkov, MD, PhD			
9.	**Requirements for enrollment the Course**	Enrolled second year			
10.	**Purposes of the curriculum (competencies):** Immunology deals with a studies on the immune system , which plays a major role in distinction of what is called ' I ' and own and what is strange or " not - I" . Furthermore, the immune system is one that attacks what is strange or ' not - I ' and protects the organism of bacteria , viruses , fungi and parasites.				

	Theory: Through theoretical instruction students will learn basic concepts and components of the immune system and how they function. Specifically, students learn for the various components of the immune defense system such as innate and adaptive immunity, which are major mediators and cells involved in the immune system, how the foreign bodies present to the the immune system (concept of antigen), how they are processed and what immune response they cause (humoral and cellular) , what antibodies are, how we defend against infections and briefly the basics of clinical immunology including the concept of hypersensitive reactions , autoimmune diseases , immunodeficiency states (congenital and acquired), immune response to tumors and transplantation. Practical instruction: Through practical instruction students will be introduced to the basic methods of examination which immunology uses. They will learn to recognize cells of the immune response, basic techniques for isolation of cells from the tissues, determination of blood groups, principles of flowcytometry, ELISA, PCR - polymerase chain reaction, immunocytochemistry and immunofluorescent staining, in situ hybridization. The purpose of practical training is to introduce the students with basic modern immunological methods and be able to read the results of such trials.
11.	**Content ofthecourse program:** Theory:

	1.Introduction in Immunology 2. Innate immune responses 3. Complement 4. Acquired immune responses (one TBU session) 5. Organs of the immune system (one TBU session) 6. B cells 7. Antibodies 8. T cell 9. Immunological mediators 10. Tolerance 11. Autoimmunity 12. Basic concepts in clinical immunology Practical instruction: 1. Introduction to immunology and the general of the immune system. 2. Cells of the immune system and isolation 3.Recognition molecules for the cells of the immune system 4. Lymphoid organs and tissues, recognizing of their structural components 5. Enzyme immunoassay (ELISA), Enzyme-immunological test to detect HIV 6. Immunoelectrophoresis, Zone immunoelectrophoresis, Immunofixation electrophoresis.Applying immunoelectrophoresis. 7. Immunochemical and immuno-physical-chemical methods.Chromatography column.Ion exchange chromatography.Gelfiltration.Affinity chromatography. 8. Methods for obtaining monoclonal antibodies.

	9. Northern and Western blot. 10. Immunocytochemistry and immunofluorescent staining, Principles of flowcytometry. 11. Intracellular cytokine staining, ELISPOT 12. PCR - polymerase chain reaction, in situ hybridization.			
12.	**Learning methods:** Lectures, group discussions methods, TBU sessions (team learning based) PBU (problem based learning) auditory and laboratory exercises, individual assignments, seminar paper, presentation of paper.			
13.	**Total available time**		4 ECTS x 30 h = 120 hours	
14.	**Distribution of available time**		30+15+15+15+45 = 120 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	30 h
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	15 h
16.	**Other activities**	**16.1.**	**Project tasks**	15 hours
		16.2.	**Individual tasks**	15 hours
		16.3.	**Home learning**	45 hours
17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**		**10 points**
	17.3.	**Activity and participation**		**20 points**

18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	At least 42 points acquired.	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	Self-evaluation	

22. Literature

22.1. Required literature

No.	Author	Title	Publisher	Year
1.				
2.	Abbas & Lichtman	Basic Immunology 3E	Elsevier Inc	2010

Article Number 3	**Study program from the first cycle of studies**

1.	Name of the subject	**Basic concepts in scientific research**
2.	Code	3MF122112
3.	Study program	General medicine

<table>
<tr><td>4.</td><td>Organiser of the study program (unit i.e. institute, department)</td><td colspan="4">Faculty of Medical Sciences

Department of Public Health and Health Protection</td></tr>
<tr><td>5.</td><td>Level (first, second, third cycle of studies)</td><td colspan="4">Integrated studies first and second cycle</td></tr>
<tr><td>6.</td><td>Academic year / Semester</td><td>Fourth semester</td><td>7.</td><td>Number of ECTS credits</td><td>2</td></tr>
<tr><td>8.</td><td>Associate Professor</td><td colspan="4">Professor D-r Milka Zdravkovska</td></tr>
<tr><td>9.</td><td>Preconditions for enrolling in the subject</td><td colspan="4">Enrolled second year</td></tr>
<tr><td>10.</td><td colspan="5">Aims of the study program (competencies): Acquiring knowledge for the basis methods and methodology of scientific research; Using biomedical databases and practicing evidence based medicine;Acquiringskills for doing researches; Implementation of a research project;Rules for preparation of a manuscript for publication of results of a scientific research;Rules and preparation for a successful presentation of a scientific labour in the form of oral or poster presentation.</td></tr>
<tr><td>11.</td><td colspan="5">The content of the study program:

<u>Theoretical study units:</u>

• Basic terms of science and scientific method
• Ethics and responsible behavior in the scientific research
• Epidemiological methods in the scientific research
• Types of researches – Design of studies
• Using biomedical databases and practicing evidence based medicine
• Strategies for searching literature
• Planning and implementation of scientific research
• Scientific labour – classification of the papers
• Parts of scientific labour
• Preparing for manuscript and publication
• Quoting references
• Writing style and presentation of the scientific labour
<u>Practical study units:</u>

• Ethics in the scientific research: case reports and discussion
• Internet research – using biomedical databases
• Strategies for searching literature
• Critical analyses of a paper (example from published papers)
• Planning a research
• Ways of collecting information - constructing a questionnaire
• Project assignment for a scientific research project for a given hypothesis - small groups work</td></tr>
</table>

	• Presentation of the project assignments– critical analysis • Presentation of the project assignments– critical analysis • Independently making an abstract from published papers (in extenso) • Presentation of abstracts – critical analysis • Oral/Poster presentation of the scientific labour			
12.	Teaching methods: Lectures, exercises, group discussionsmethods, individual assignments, seminar papers, presentation of scientific papers;			
13.	Total time available		2 ECTS x 30 h = 60 hours	
14.	Allocation of the available time		30+0+15+5+10 = 60 hours	
15.	Forms of teaching activities	15.1.	Lectures- theoretical education	30 hours
		15.2.	Exercises (laboratory auditory), seminar papers, teamwork	
16.	Other forms of activities	16.1.	Project assignments	15 hours
		16.2.	Individual assignments	5 hours
		16.3.	Studying at home	10 hours
17.	Method of evaluation			
	17.1.	Tests and a final oral exam		70 points
	17.2.	Seminar paper/project (presentation: Written and oral)		10 points
	17.3.	Activity and participation		20 points
18.	Criteria for evaluating (points / grade)		to 50points	5 (five) (F)
			from51 to 60points	6 (six) (E)
			from61 to 70points	7 (seven) (D)
			from71 to 80points	8 (eight) (C)
			from81 to 90points	9 (nine) (B)
			from 91 to 100points	10 (ten) (A)

19.	Signature requirement and taking the final exam	For a signature - presence of at least 7 (60%) lectures; For the final exam - scored at least 42 points on all grounds;
20.	Language ofteaching	English
21.	Method of monitoring the quality of teaching	Self evaluation

22. Literature

22.1 Compulsory literature

Ordinal number	Author	Title	Publisher	Year
1.	R. J. Shavelson et al.	Scientific research in education	Springer	2002

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**First Medical Aid**			
2.	**Code**	3MF 111 112			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences Department of General Medicine			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	first	**7.**	**Number of credits**	2
8.	**Professor (s)**	Velo Markovski,Phd			
9.	**Requirements for enrollment the Course**	Enrolled first year			
10.	**Purposes of the curriculum (competencies):** learning theskillsto save thelife ofwounded, andpreventusfurtherinjury andcomplications, performtriageand providefirst aidinmassdisasters, learning theskillsfor heartlungandbrainresuscitation				
11.	**Content of the course program:** 1.Introduction tocardiacpulmonaryresuscitation 2. Acute respiratory failure				

	3.AcuteCardiac Arrest(CA) 4. Basiclife support 5. Advanced life support 6. Prolonged life support 7. First aid inpoly-trauma and fracture 8. First aid inbleeding 9. First aid inburns; impactofcurrent 10.First aidforfrostbite, drowning 11.First aidfordamagefromacid 12.First aidandtriageinmassdisasters			
12.	**Learning methods: theoretical and practical lectures**			
13.	**Total available time**		2 EKTS x 30 h = 60 hours	
14.	**Distribution of available time**		15+15+15+5+10 = 60 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	**15 hours**
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	**15 hours**
16.	**Other forms and activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**5 hours**

		16.3.	**Home learning**	**10 hours**
17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**		**10 points**
	17.3.	**Activity and participation**		**20 points**
18.	**Assessment Criteria (points /score)**		**up 50points**	**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.	**Signature requirement andpassing the final exam**		**none**	
20.	**Language of teaching / study**		English	
21.	**Method of monitoring the quality of teaching**		**Self-evaluation**	

22.	**Literature**					
		Required literature				
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.1.	**1.**	**P. S. Auerbach**	**Medicine for the outdoors**	**Elsevier**	**2008**
		2.				
		3.				
	22.2.	**Additional literature**				

		No.	Author	Title	Publisher	Year
		1.				
		2.				
		3.				

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Medical Ethics**			
2.	**Code**	3MF121712			
3.	**Study Program**	General medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	fourth	**7.**	**Number of credits**	2
8.	**Professor (s)**	Doc.dr.Gordana Panova			
9.	**Requirements for enrollment the Course**	Enrolled in second year			
10.	**Purposes ofthe curriculum (competencies):**Objectives / competencies of the subject: Adoption of basic ethical and sociological knowledge of medicine and work in medicnata training future professional nurses / technicians for observation and				

	treatment and care of the patient as a complex bio unit.			
11.	**Contents of the subject:** Conceptual frame of medicine, historical overview of medicine as a science and practice. Clinical Medicine and ethical problems of clinical work. History of medical ethics: Hippocratic Oath and its historical implications, Geneva revision of the Hippocratic Oath and ethical codes. Medical ethics in practice: specificities of medical ethics, deontology, medical secret, shared secret, jatrogenizacija euthanasia, ethical and legal responsibility of the physician, the ethics of medical research, medical law: basic issues and aspects.			
12.	**Learning methods: lecture, exercises, consultations**			
13.	**Total available time**		2 ECTS x 30 h = 60 hours	
14.	**Distribution of available time**		30+0+15+5+10 = 60 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	30 **hours**
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work work**	0 **hours**
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**

		16.2.	**Individual tasks**	**5 hours**
		16.3.	**Home learning**	**10 hours**

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**

18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	Passed two colloquia attendance of teaching and presenting their own project assignment, and scored at least 42 points.
20.	**Language of teaching / study**	English
21.	**Method of monitoring the quality of teaching**	**Self-evaluation** **Written and oral presentation of the learning content,Practical examples from hospitals**

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**

		1.				
		2.	**K.R.Seturman**	**Communication skills in clinical practice**	**Tabernakul**	**2010**
		3.				
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	**Marcia Lewis Carroll**	**Tamparo Medical Law, Ethics and Bioethics Academic Press,**	**Tabernakul-Skopje**	**2010**
		2.	**Marich John Medical**	**Ethics,**	**Faculty of Medicine, Belgrade,**	**2005**
		3.				

Article Number 3	**Study program from the first cycle of studies**				
1.	Name of the subject	**Basic concepts in Public Health**			
2.	Code	3MF122012			
3.	Study program	General medicine			
4.	Organiser of the study program (unit i.e. institute, department)	Faculty of Medical Sciences Department of Public Health and Health Protection			
5.	Level (first, second, third cycle of studies)	Integrated studies first and second cycle			
6.	Academic year / Semester	Fourth semester	7.	Credits	2
8.	Professor	Professor D-r Milka Zdravkovska			
9.	Preconditions for enrolling in the subject	Enrolled second year			
10.	Aims of the study program (competencies): Acquisition of basic knowledge of the role, need and content of public health; certain infectious and chronic non infectious diseases as a public health problem				
11.	The content of the study program: <u>Theoretical study units:</u> 1. Introduction to public health; Organizational setup and goals; 2. Intestinal infectious diseases – public health aspects 3. Respiratory infectious diseases - public health aspects 4. Transmissive infectious diseases - public health aspects 5. Blood and sexually transmited infectious diseases - public health aspects 6. Intrahospital infections; antibiotics resistance as a public health problem 7. Periods of occurrence of chronic degenerative diseases and level of prevention 8. Cardiovascular and cerebrovascular diseases - public health aspects 9. Diabetes and its chronic complications as a public health problem 10. Neoplasms - public health aspects 11. Chronic obstructive pulmonary disease and ulcer disease 12. Addiction diseases as a public health problem				
12.	Teaching methods: Lectures, group discussionsmethods, individual assignments, seminar papers;				

13.	Total time available		2 ECTS x 30 h = 60 hours	
14.	Allocation of the available time		30+0+15+5+10 = 60 hours	
15.	Forms of teaching activities	15.1.	Lectures- theoretical education	30 hours
		15.2.	Exercises (laboratory auditory), seminar papers, teamwork	
16.	Other forms of activities	16.1.	Project assignments	15 hours
		16.2.	Individual assignments	5 hours
		16.3.	Studying at home	10 hours
17.	Method of evaluation			
	17.1.	Tests and a final oral exam		70 points
	17.2.	Seminar paper/project (presentation: Written and oral)		10 points
	17.3.	Activity and participation		20 points
18.	Criteria for evaluating (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.	Signature requirement and taking the final exam		For a signature - presence of at least 7 (60%) lectures; For the final exam - scored at least 42 points on all grounds;	
20.	Language of teaching		English	
21.	Method of monitoring the quality of teaching		Self evaluation	

22.	Literature

	22.1	Compulsory literature				
		Ordinal number	Author	Title	Publisher	Year
		1.				
		2.	Theodore H. Tulchinsky, Elena A. Varavikova	The New Public Health	Elsevier	2003
		3.				
	22.2	Additional literature				
		Ред. број	Author	Title	Publisher	Year
		1.	James F. Jackel David L. Katz Joan J. Elmore Dorothea M. J.	Epidemiology, biostatistics and preventive medicine	Tabernakul	2010

Annex No.3	Program of the Course - firstcyclestudies				
1.	Title of the Course	**Communication skills**			
2.	Code	MDOM1313			
3.	Study Program	General medicine			
4.	Organizer of the study program (unit or institute, Faculty, department)	University Goce Delcev Faculty of Medical Sciences			
5.	Cycle (first, second and third cycle)	Integrated studies first and second cycle			
6.	Academic year / semester	forth	7.	Number of credits	2
8.	Professor (s)	Doc.dr.GordanaPanova			
9.	Requirements for enrollment the Course	Enrolled in second year			
10.	Purposes ofthe curriculum (competencies): Knowledge and understanding of basic communication rules and the individual needs to communicate with other people - Organizing an active and independent learning communication skills and preparing students for effective learning basic communication skills - Training for establishing effective communication between staff health workers, patients and their relatives and friends, as well as the formation feedback information for successful communication, with special emphasis on health communication. - Communication advantages, cooperation and teamwork of the University and in health care facilities				
11	Contents of the subject:Communication (definition, verbal and nonverbal				

.	communication styles) Importance of non-verbal communication, body language (posture, eye contact, height, and volume of voice, adequate mimics a clue about personal space ...) Ability to hear, Barriers to good communication, negotiation, communication between healthcare professionals (code of conduct, speech, dress, etc.), Communication pacijent doctor pacijent-nurse, health worker (problematic reactions, adequate reactions), Tech Troubleshooting and релаксационе techniques stormy оут (definition, uzroci way learning), aggressive communication style, Passive communication stil.Komunikacija health workers in all health institutions, clinics, hospitals, clinics, sanatoriums.			
12.	Learning methods: lecture, exercises, consultations			
13.	Total available time		2 ECTS x 30 h = 60 hours	
14.	Distribution of available time		30+0+15+5+10 = 60 hours	
15.	Forms of teaching / learning activities	15.1.	lectures / theoretical - contact teaching, e-teaching	30 hours
		15.2.	theoretical andpractical exercises, e-exams, preparationofindependentseminar work	/
16	Other activities	16.1.	Project tasks	15 hours

.		16.2.	Individual tasks	5 hours
		16.3.	Home learning	10 hours

17.	Method of assessment		
	17.1.	Tests / oral exams	70 points
	17.2.	Seminars (paper/project - presentation: written and/or oral)	10 points
	17.3.	Activity and participation	20 points

18.	Assessment Criteria (points /score)	up 50points	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.	Signature requiremen and passing the final exam	Passedtwocolloquiaattendanceofteachingandpresentingtheirownprojectassignment, andscoredatleast 42 points.	
20.	Language of teaching / study	English	
21.	Method of monitoring the quality of teaching	Self-evaluation Written and oral presentation of the learning content,Practical examples from hospitals	

22.	Literature					
	22.1.	Required literature				
		No.	Author	Title	Publisher	Year
		1.				
		2.	K.R.Seturman	Communication skills in clinical practice	Tabernakul	2010

		3.	Hilde and Tom Eide,	Communication	UB-Sr	2006
	22.2.	Additional literature				
		No.	Author	Title	Publisher	Year
		1.	Marcia Lewis Carroll	Tamparo Medical Law, Ethics and Bioethics Academic Press,	Tabernakul-Skopje	2010
		2.	Marich John Medical	Communication skills in clinical practice	Faculty of Medicine, Belgrade,	2005
		3.	R.C.Petterson	Based Learning problems	BiokontoIgalo	2008

Annex No.3	**Program of the Course - first cycle studies**				
1.	**Title of the Course**	**Fetal anatomy and malformations**			
2.	**Code**	**3MF103312**			
3.	**Study Program**	General medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of medical sciences Department of basic medical sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	fourth	**7.**	**Number of credits**	2
8.	**Professor (s)**	Prof d-r Elizabeta Zisovska			
9.	**Requirements for enrollment the Course**	Confirmed third and assigned fourth semester			
10.	**Purposes ofthe curriculum (competencies): introduction to the embrionic development of the fetus, the impact of the endogenous and exogenous agents during the intrauterine life, types of malformations**				
11.	**Content ofthecourse program:** Process of conception, nidation, genetic errors Developmental phases and errors in the first trimester				

	Developmental phases and errors in the second trimester Developmental phases and errors in the third trimester Embriology and anomalies of the cardiovascular and gastrointestinal system Embriology and anomalies of the respiratory and urinary system Embriology and anomalies of the central nervous system Embriology and anomalies of the reproductive system and sensory organs Introduction to the congenital anomalies, classifications, minor and major anomalies Endogenous influenced congenital anomalies Exogenous factors causing congenital anomalies Multiple congenital anomalies			
12.	**Learning methods:** -lectures -profound learning exploring appropriate web sites -detailed work out of a particular topic and writing a paper on that			
13.	**Total available time**		2 ECTS x 30 h = 60 hours	
14.	**Distribution of available time**		30+0+15+5+10 = 60 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	**30 hours**
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	0 hours

16.	**Other forms of activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**5 hours**
		16.3.	**Home learning**	**10 hours**

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**40 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**10 points**
	17.4	**Final exam (oral)**	**40 points**

18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	• **Cumulative sum of the points based on presence, activity, practical units, coloquia, and project-activity paper** • **The coloquia are independent one from another** • **The final exam is not dependant on the coloquia, but the pre-requisition for the final exam is the total number of cumulative points 42 and more** **In a case of insuficient number of points for the final exam, there is an option for additional kind of activity**

		(coloquium, project activity, etc) if there are required number of students
20.	**Language of teaching / study**	English
21.	**Method of monitoring the quality of teaching**	**Students' evaluation and Self-evaluation**

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Issaacson G, Minz S, Crellin ES	Atlas of Fetal Sectional Anatomy: With Ultrasound and Magnetic Resonance Imaging.	Springer,	1986
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Frank A. Chervenak et al.	The Clinical Care of the Fetus As a Patient	Parthenon Publ. Group	1999

Annex No.3	**Program of the Course - first cycle studies**				
1.	**Title of the Course**	**Microbiology and Parasitology 2**			
2.	**Code**	**3MF101512**			
3.	**Study Program**	**General Medicine**			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	fifth	**7.**	**Number of credits**	6
8.	**Professor (s)**	Ass. prof. Vaso Taleski, MD, D-r Sc.			
9.	**Requirements for enrollment the Course**	Completed attendance atcourse Microbiology and parasitology 1.			
10.	**Purposes ofthe curriculum (competencies):** Basic aim of the course programis to introduce and enable students to acquire theoretical, practical knowledge, skills and competences in field of special microbiology, to be introduced with most important bacteria, viruses, fungi and parasites, methods for microbiological diagnosis from classical through advanced methods of isolation and identification including some molecular diagnostic methods.				
11.	**Content of the course program:** I. <u>BACTERIOLOGY</u> 1. Gram positive aerobic cocci: Staphylococcus (S. Aureus, S.epidermidis, S. saprofiticus)Streptococcus (S. pyogenes, S. agalactiae, S. faecalis, S. pneumoniae)				

Gram positive anaerobic cocci: (Peptostreptococcus, Peptococcus)

Gram negative aerobic cocci (Neisseria meningitidis, Neisseria gonorrhoeae)

2. Gram negative rods (Haemophilus influenzae, Bordetella, Legionella Enteropathogens (Enterobacteriaceae): Escherichia coli, Klebsiella, Shigella, Salmonella, Proteus, Yersinia, Enterobacter, Serratia, Providencia, Morganella, Citrobacter

3. Pseudomonas, Acinetobacter, Brucella, Francisella, Campylobacter, Helicobacter pylori, Vibrio
4. Gram negative anaerobic rods:Bacterioides, Fusobacterium, Prevotella
   Gram positive anaerobic rods:Clostridium (Cl. gass gangrene, Cl. Tetani, Cl. Botulinum, Cl. Difficile)

   Gram positive sporeforming rods : Bacillus (B. anthracis, B. cereus)

   Gram positive non-sporeforming rod (Corynebacterium diphteriae)

5. Spiral bacteria (Spirochaetaceae) : Treponema, Borrelia, Leptorpira, Actynomyces, Nocardia

6. Mycobacterium (M. tuberculosis, M. bovis, M. leprae), Chlamydiaceae (Chlamydia trachomatis), Mycoplasma, Ureaplasma, Gardnerella vaginalis, Rickettsia, Coxiella

II.<u>VIROLOGY</u>

7. Importance of viral infections, Diagnostic methods for viral infections Classification of viruses

8. DNA viruses: Herpsviridae, Herpes virusi(Herpes simplex 1,2, Virus varicella zoster, Cytomegalovirus,EB-virus)
   Hepadnaviridae (Hepatitis B virus)

   Human papilloma virus

   Adenoviridae (Adenovirus)

   Poxviridae (Variola virus)

   RNA – viruses:

9. RNA viruses:
   Hepatitis C virus, Rubella virus, HIV, Picornaviridae (Enterovirusi)

   Poliovirus, Coxackie virusi, Hepatitis A virus

   Orthomyxoviridae: Virus influenzae A,B, Virus influenzae A subtype

H5N1, H1N1

Paramyxoviridae (Virus mumps)

Morbilli virus, Rhabdoviridae (Lyssa virus), Reoviridae (Rota virus)

III. MICOLOGY

10. Special mycology
Surface-cutaneous mycosses

Dermathophytes (Trichophyton, Microsporum, Epidermophyton)

Systematic mycosses

Biphasic fungi (Dimorphic fungi)

Oportunistic fungi

Pathogenic yeasts (Cryptococcus neoformans, Candida albicans)

Aspergilus

IV. Parasitology

11. Entamoeba hystolytica
Flagellates (Giardia lamblia, Trichomonas vaginalis, Leishmania, Trypanosoma)

Sporosoa (Toxoplasma gondii, Plasmodium)

12. Helmintes (Taenia solium, Taenia saginata, Echinococcus, Hymenolepis nana, Shistosoma, Fasciola hepatica, Ancylostoma duodenale, Necator americanus, strongyloides stercoralis, Ascaris lumbricoides, Enterobius vermicularis, Trichuris trichura, Trichinela spiralis, Loa Loa, Wuchereria bancrofti)

Contents of practical program

1. Microbiological diagnosis of gram positive cocci
2. Microbiological diagnosis of gram negative cocci
3. Microbiological diagnosis of Enteropathogens
4. Microbiological diagnosis of Haemophilus influenzae, Bordetella, Legionella

	5. Microbiological diagnosis of anaerobe gram positive and anaerobe gram negative rods 6. Microbiological diagnosis of gram positive spore forming and gram positive non-spore forming bacteria 7. Microbiological diagnosis of spiral bacteria 8. Microbiological diagnosis of Mycobacterium, Chlamydia trachomatis, Mycoplasma, Ureaplasma, Gardnerella vaginalis 9. Microbiological diagnosis of some DNA viruses 10. Microbiological diagnosis of some RNA viruses 11. Microbiological diagnosis of fungi and yeasts 12. Microbiological diagnosis of parasites			
12.	**Learning methods:** Methods of oral and visual learning/presentations and practical work in the lab.			
13.	**Total available time**		6 ECTS x 30 h = 180 hours	
14.	**Distribution of available time**		45+30+15+15+75 = 180 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	45 hours
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	30 hours
16.	**Other activities**	**16.1.**	**Project tasks**	15hours
		16.2.	**Individual tasks**	15 hours
		16.3.	**Home learning**	75 hours
17.	**Method of assessment**			
	17.1.	**Tests**		40 points
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**		10 points
	17.3.	**Activity and participation during lecturing**		10 points

	17.4	**Activity and participation during lab practical work**	10 points
	17.5	**Final exam**	30 points
18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	Requirements for signature: presence at lecturing and practical work. Requirementsfor final exam: pass an examination of Microbiology and parasitology 1, at least 42 points from two colloquia, presence at lecturing, practical lab work and seminars (paper/project - presentation. Colloquia are not conditionally connected. For students with points over 37 and less than 42, professor could organize additional colloquium with maximum of 10 additional points	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	Student evaluation, Self-evaluation	

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Greenwood D. et all.	Medical microbiology	Project of the Government of the	17-edition, 2006,

					Republic of Macedonia, for translation of vocational and scientific books	Translated in 2011
		2.	Panovski N. et all. Guest / invited author: Vaso Taleski	Medical microbiology - Special part	Institute of Microbiology and parasitology, Medical faculty Skopje.	2011
		3.	Jawetz, Melnick, & Adelberg	**"**Medical Microbiology"	The McGraw-Hill Companies	24th ed., 2007
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Pathophysiology 1**			
2.	**Code**	3MF103112			
3.	**Study Program**	General medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	**University Goce Delcev** **Faculty of Medical science**			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	fifth semester	**7.**	**Number of credits**	6
8.	**Professor (s)**	Prof. dr. Zoran Handziski,			
9.	**Requirements for enrollment the Course**	Enrolled third year			
10.	**Purposes ofthe curriculum (competencies):** Introducing the students with the general malfunctions and pathophysiological processes of the organism				
11.	**Content ofthecourse program:** Theoretical study units: • Disordersof the structureand functionof macromolecules • Disorders ofsubcelularstructures				

	• Disorders ofenergy metabolismandthe metabolism ofessential nutrients • Disorders ofthe turnover ofspecificmetaboliccompounds • Disorders ofthe turnover ofwater andelectrolytes. • Disorders of theacid-basebalance • Biologically activeendogenouscompounds inthepathophysiologicalprocesses • Disordersof neuro-vegetativeregulation. Pathophysiologicalbasisofpain. • Disorders ofthermoregulation. Imunopathophysiology • Inflammation. Overallresponseof the organism tothe harmful effects • Infections • Circulatoryshock. Disturbanceof consciousness. • Disordersof developmentandgrowth. Malignanttransformationandgrowth. Practical teaching units: • Pathophysiologicalbasisof inheritanceof diseasesandsyndromes • Cell death • Substratehipoenergosis-starvation • Disorders ofproteinmetabolism • Disorders ofpurinemetabolism-Gout • Disordersofcalcium, phosphateandmagnesiumturnover • Gastrointestinalhormones andneuropeptides • Reactions oftissuetransplantation • Pathophysiology ofaging
12.	**Learning methods: Interactive teaching ofl ectures and tutorials, practical exercises.**

13.	**Total available time**		6 ECTS x 30 h = 180 hours	
14.	**Distribution of available time**		45+30+15+15+75 = 180 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	**45 hours**
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	**30 hours**
16.	**Other forms of activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**15 hours**
		16.3.	**Home learning**	**75 hours**

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**

18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	• **The method of assessment is based on the accumulation of points**	

		scored: lectures, tutorials, colloquia and seminar work; **• colloquia are independent of each other, i.e. passing one is not a prerequisite for taking other colloquium;** **• The final exam also does not depend on colloquiums, they are not a requirement for passing the final exam, but the total number of points scored, which should not be less than 42 points;** **• In case of insufficient number of points for passing the final exam, the professor can arrange additional colloquium or additional activity when it has a sufficient number of candidates.**
20.	**Language of teaching / study**	English
21.	**Method of monitoringt he quality of teaching**	**Self-evaluation**

22.	**Literature**					
		Required literature				
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.1.	**1.**	**Gamulin S et all.**	**Pathophysiology**	**6th edition , Zagreb**	**2005**
		2.	**Vaskova O et all.**	**Practicum in general and special pathological**	**Skopje**	

				physiology		
		3.	**Tadzer I et all.**	**General pathological physiology**	**Belgrade**	
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				
		2.				
		3.				

Annex No.3	Program of the Course - first cycle studies				
1.	**Title of the Course**	**Anatomic Pathology 1**			
2.	**Code**	3MF102812			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences Department of Pathology			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	fifth semester	**7.**	**Number of credits**	6
8.	**Professor (s)**	Prof. Gordana Petrushevska, MD, PhD			
9.	**Requirements for enrollment the Course**	Taken courses: Anatomy 3 and Histology with embryology 2			
10.	**Purposes ofthe curriculum (competencies):**Acquiring knowledge about etiology, mechanisms and morphological changes in cells and tissues of the human organism under the influence of pathological agents and diagnosis of that changes				
11.	**Content ofthecourse program:**				

	1. Cell injuries, Cell Death, and Adaptations; 2. Acute and Chronic Inflammation; 3. Tissue Repair: Regeneration, Healing, and Fibrosis; 4. Hemodynamic Disorders, Thrombosis, and Shock; 5. Diseases of the Immune System; 6. Neoplasia; 7. Genetic and Pediatric Diseases; 8. Environmental and Nutritional Diseases; 9. General Pathology of Infectious Diseases; 10. Pathology of the Blood Vessels;			
12.	**Learning methods:** Theoretical Lectures, Practical Exercises, Term papers, Individual Presentation;			
13.	**Total available time**		6 ECTS x 30 h = 180 hours	
14.	**Distribution of available time**		45+30+15+15+75 = 180 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	45 h
		15.2.	**theoretical and practical exercises,**	30 h

			e-exams, preparation of independent seminar work	
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**15 hours**
		16.3.	**Home learning**	**75 hours**

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**

18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	Taken and succesfully passed courses of: Anatomy 3 and Histology with embryology 2	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**	

22.	**Literature**

	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	**Kumar, Abbas, Fausto, Mitchell**	**Robbins Basis of Pathology, 8th**	**Saunders, Elsevier**	**2010**
		2.	**Eduard K. Klatt**	**Robbins and Cotran Atlas of Pathology**	**Saunders, Elsevier**	**2009**
		3.	**Authorized Lectures**			
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				
		2.				
		3.				

Annex No.3	**Program of the Course - First cycle studies**				
1.	**Title of the Course**	**Pharmacology and Toxicology 1**			
2.	**Code**	3MF113012			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University “Goce Delcev” Faculty of Medical Sciences Department of Medicine			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	fifth semester	**7.**	**Number of credits**	5
8.	**Professor (s)**	Professor dr. Stojmir Petrov			
9.	**Requirements for enrollment the Course**	Enrolled third year			
10.	**Purposes ofthe curriculum (competencies):** To introduce students with basic pharmacokinetic (absorption, distribution, metabolism and elimination of drugs) and pharmacodinamic processes in the human organism, the mechanism of action of drugs, factors that determine safety and efficacy, dosing and factors affecting dosing of drugs , interactions and side effects of medications				

<table>
<tr><td>11.</td><td colspan="4">Content of the course program:

1. Basic pharmacology
2. Pharmacokinetics
3. Absorption of drugs
4. Distribution of drugs
5. Elimination of drugs
6. Pharmacodynamics
7. Mechanism of action of drugs
8. Factors that affect the actions of drugs
9. General terms of accumulation and tolerance; Interaction between drugs
10. Side effects of drugs
11. Addiction to drugs
12. Basic principles of pharmacogenetics</td></tr>
<tr><td>12.</td><td colspan="4">Learning methods:

- Research, working in small groups, homework, practical work, independent seminar work, discussion, debate, individual tasks</td></tr>
<tr><td>13.</td><td colspan="2">Total available time</td><td colspan="2">5 ECTS x 30 h = 150 hours</td></tr>
<tr><td>14.</td><td colspan="2">Distribution of available time</td><td colspan="2">30+30+15+15+60 = 150 hours</td></tr>
<tr><td rowspan="2">15.</td><td rowspan="2">Forms of teaching / learning activities</td><td>15.1.</td><td>lectures / theoretical - contact teaching,
e-teaching</td><td>30 h</td></tr>
<tr><td>15.2.</td><td>theoretical and practical exercises,
e-exams, preparation of independent seminar work</td><td>30 h</td></tr>
<tr><td rowspan="2">16.</td><td rowspan="2">Other activities</td><td>16.1.</td><td>Project tasks</td><td>15 hours</td></tr>
<tr><td>16.2.</td><td>Individual tasks</td><td>15</td></tr>
</table>

				hours
		16.3.	**Home learning**	**60 hours**
17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**		**10 points**
	17.3.	**Activity and participation**		**20 points**
18.	**Assessment Criteria (points /score)**		**up 50points**	**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.	**Signature requirement and passing the final exam**		60% success of all pre-exam activities ie 42 points from the two colloquia, independent seminar work, regularity of theoretical andpractical exercises	
20.	**Language of teaching / study**		English	
21.	**Method of monitoring the quality of teaching**		**Self-evaluation**	

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**

		1.	Rang HP, Dale MM, Ritter JM, Moore PK	PHARMACOLOGY, translation	Churchill Livingstone	London 2005
		2.				
		3.				
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Goodman & Gilman's	The Pharmacological basis of Therapeutics; last edition		
		2.	Vladislav M. Varagic, Milenko Milosevic	Pharmacology		2005
		3.				

Annex No.3	Program of the Course – first cycle studies

1.	Title of the Course	**Clinical examination 1**			
2.	Code	3MF108112			
3.	Study Program	General Medicine			
4.	Organizer of the study program (unit or institute, Faculty, department	University GoceDelcev Faculty of Medical science			
5.	Cycle (first, second and third cycle)	Integrated studies first and second cycle			
6.	Academic year/ semester	Fifth	7.	Number of credits	5
8.	Professor (s)	Doc Marija Vavlukis			
9.	Requirements for enrolment the Course	Verified fourth and fifth semester enrolled			
10.	Purposes of the curriculum (competencies): • Mastering of theoretical knowledge about the basics of clinical trials in general and in particular organs and organ • Mastering of practical skills – clinical skills of examination • Mastering (recognition) with the basic paraclinical examinations used for acquiring knowledge of morphological and functional state of organs and organ				
11.	Content of the course programme • Medical history • Fundamentals of clinical examination ○ General clinic examination лед ○ Clinical examination of the head and ○ Clinical examination of the chest, lungs and ○ Clinical examination of abdomen ○ Clinical examination of the urogenital tract ○ Clinical examination of extremities • Characteristics of clinical presentation and Paraclinical tests diseases: ○ Cardiovascular System ○ Respiratory System ○ Gastrointestinal System ○ Endocrine system				

	○ Haematological deseases ○ Diseases of bone-joint system (rheumatic diseases) ○ Urogenital system ○ Clinical characteristics of poisoning (toxicology)			
12.	Learning methods: interactive lectures, practical classes, project work			
13.	Total available time		5 ECTS x 30 h = 150 hours	
14.	Distribution of available time		30+30+15+15+60 = 150 hours	
15.	Forms of teaching/learning activities/ per week	15.1.	Lectures – theoretical	30 h
		15.2.	Exercises (laboratory, auditorial), seminars, teamwork	30 h
16.	Other forms of activities	16.1.	Project tasks	15 h
		16.2.	Individual tasks	15 h
		16.3.	Home learning	60 h
17.	Method of assessment			
	17.1.	Presence and activity classes		max10points
	17.2	Presence and activity exercises		max 10 points
	17.3	Continuous verification tests		Max 2 x20 points
	17.4	Seminar work/ project (presentation: written and oral) optional		max 10 points
	17.5	Practical part of the exam		max 10 points
	17.6	Oral part of the exam		max30 points
18.	Assessment Criteria (points /score)		up 50points	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.	Signature requirement and		Completed a minimum of 42 points of presence and activity of lectures, practical	

	passing the final exam	experience andtests
20.	Language of teaching / study	English
21.	Method of monitoring the quality of teaching	Self-evaluation

22.	Literature					
	22.1.	Required literature				
		No	Author	Title	Publisher	Year
		1.	Vladimir Serafomivski et al.	Internal propedevtic	Makedonska Riznica	2004
		2.	Stefan J. McFee, William f. Genong	Pathophysiology of Disease> An introduction to Clinical Medicine (5th edition)	Tabernakul	2010
	22.2.	Additional literature				
		No.	Author	Title	Publisher	Year
		1.				
		2.				

<table>
<tr><td>Article Number 3</td><td colspan="5">Study program from the first cycle of studies</td></tr>
<tr><td>1.</td><td>Name of the subject</td><td colspan="4">Health management</td></tr>
<tr><td>2.</td><td>Code</td><td colspan="4">3MF120812</td></tr>
<tr><td>3.</td><td>Study program</td><td colspan="4">General medicine</td></tr>
<tr><td>4.</td><td>Organiser of the study program (unit i.e. institute, department)</td><td colspan="4">Faculty of Medical Sciences
Department of Public Health and Health Protection</td></tr>
<tr><td>5.</td><td>Level (first, second, third cycle of studies)</td><td colspan="4">Integrated studies first and second cycle</td></tr>
<tr><td>6.</td><td>Academic year / Semester</td><td>Fifth semester</td><td>7.</td><td>Credits</td><td>2</td></tr>
<tr><td>8.</td><td>Associate Professor</td><td colspan="4">Professor D-r Milka Zdravkovska</td></tr>
<tr><td>9.</td><td>Preconditions for enrolling in the subject</td><td colspan="4">Enrolled third year</td></tr>
<tr><td>10.</td><td colspan="5">Aims of the study program (competencies): Acquisition of the basics of health management</td></tr>
<tr><td>11.</td><td colspan="5">The content of the study program:
<u>Theoretical study units:</u>
1. Definitions for management;
2. Levels of management of the health system;
3. Health care institution as an organization system;
4. Types of health care institutions; Managers in the health care services;
5. Managing with the human recourses in the health care institutions; Managing with the other resources in the health care;
6. Strategic management;
7. Leadership as a contemporary approach in the management;
8. Change management;
9. Business (corporate) ethics;
10. Habits of the successful people;
11. Time management;
12. Motivation;</td></tr>
<tr><td>12.</td><td colspan="5">Teaching methods: Lectures, exercises, group discussionsmethods, individual assignments, seminar papers, presentation of scientific papers;</td></tr>
<tr><td>13.</td><td>Total time available</td><td colspan="4">2 ECTS x 30 h = 60 hours</td></tr>
</table>

14.	Allocation of the available time		30+0+15+5+10 = 60 hours	
15.	Forms of teaching activities	15.1.	Lectures- theoretical education	30 hours
		15.2.	Exercises (laboratory auditory), seminar papers, teamwork	
16.	Other forms of activities	16.1.	Project assignments	15 hours
		16.2.	Individual assignments	5 hours
		16.3.	Studying at home	10 hours
17.	Method of evaluation			
	17.1.	Tests and a final oral exam		70 points
	17.2.	Seminar paper/project (presentation: Written and oral)		10 points
	17.3.	Activity and participation		20 points
18.	Criteria for evaluating (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.	Signature requirement and taking the final exam		signature - attendance of at least 7 (60%) lectures ; final exam - cumulative score of 60% of all required activities (midterm tests, attendance and seminar papers)	
20.	Language of teaching		English	
21.	Method of monitoring the quality of teaching		Self evaluation	

22.	Literature					
	22.1	Compulsory literature				
		Ordinal number	Author	Title	Publisher	Year
		1.				
		2.	S. B. Buchbinder	Health Care Managment	Elsevier	2008
		3.				
	22.2	Additional literature				
		Ред. број	Author	Title	Publisher	Year
		1.				
		2.				
		3.				

<table>
<tr><th colspan="6">Course for the first cycle of study</th></tr>
<tr><td>1.</td><td>Course title</td><td colspan="4">DEVELOPMENTAL PSYCHOPATHOLOGY</td></tr>
<tr><td>2.</td><td>Code</td><td colspan="4"></td></tr>
<tr><td>3.</td><td>Study programme</td><td colspan="4">General Medicine</td></tr>
<tr><td>4.</td><td>Organizer of the study programme (unit/ institute, department)</td><td colspan="4">Faculty of Medical Science</td></tr>
<tr><td>5.</td><td>Level of study (first, second, third cycle)</td><td colspan="4">Integrated studies first and second cycle</td></tr>
<tr><td>6.</td><td>Academic year / semester</td><td>fifth semester</td><td>7.</td><td>Number of ECTS credits</td><td>2</td></tr>
<tr><td>8.</td><td>Professor</td><td colspan="4">Prof. Lence MIloseva, Ph.D</td></tr>
<tr><td>9.</td><td>Preconditions for course enrollment</td><td colspan="4">enrolled third year</td></tr>
<tr><td>10.</td><td colspan="5">Goals of the syllabus (competences):

To understand the phenomenology of psychopathology among children and adolescents, including symptom presentation, epidemiology, and developmental course.
To understand the developmental psychopathology approach to clinical child and adolescent psychology, including an exploration of each of the following issues:
-What factors contribute to the risk of, or resilience from, psychopathology at different stages in development?
-Which childhood psychological disorders (or symptoms within a disorder) are most sensitive to developmental changes?
-How can we use developmental theory to understand the varied presentations of a single disorder across development?
-How might the presence of psychological symptoms affect the course of children’s development in related domains?
-How can the study of childhood psychopathology inform us about normative development?

To become acquainted with current research questions pertaining to different areas of developmental psychopathology .
To gain exposure to particularly innovative methods and approaches used in developmental psychopathology research.</td></tr>
<tr><td>11.</td><td colspan="5">Content of the syllabus:

• Developmental Psychopathology as a scientific discipline
• Connection between Developmental Psychology and Developmental Psychopathology
• Theory and methods in Developmental Psychopathology:various approaches
to understanding developmental influences on risk and maladaptation.
Basic Psychological Theories: Psychodynamic Theories; Behavioral</td></tr>
</table>

<table>
<tr><td></td><td colspan="4">Theories; Cognitive Theories; Attachment Theory; Family Systems Theories.

• Developmental neuroscience and developmental psychopathology: neural plasticity; brain mapping (neuroimaging); behavioral and molecular genetics; stress and neurobiology;immunology and developmental psychopathology.

• Key concepts in Developmental Psychopathology (Resiliency; Risk and protective factors:, Maltreatment and other early adversity effects; stress; the role of social support, family processes, and early experience on adaptation and maladaptation).

• Disorders in Infancy; Diagnostic Classification 0-3
• Conduct disorder and oppositional Defiant Disorder
• Autism and other Pervasive Developmental Disorders
• Eating disorder or dysfunctional eating; sleeping disorder; elimination disorder etc.
• ADHD (Attention-Deficit/Hyperactivity Disorder)
• Bipolar Disorders. Depression Disorders. Suicide and Self-Injurious Behavior; Anxiety Disorders
• Psychosis across developmental periods
• Posttraumatic disorder ; Disorders Associated with Trauma or Maltreatment
• Mental retardation; audio, visual, physical disabilities etc.
• Disorders Related to Physical Health and Functioning
• Brain Injury
• Developmental Psychopathology approach in prevention and intervention. Developing and Testing Interventions.</td></tr>
<tr><td>12.</td><td colspan="4">Methods of study:
seminars, interactive method: group work, reports, homework, seminar papers, discussion, debate, cooperative studying techniques, individual tasks, simulation of extra-curricular educational activities, individual studying</td></tr>
<tr><td>13.</td><td colspan="2">Total amount of available time:</td><td colspan="2">2 ECTS x 30 h = 60 hours</td></tr>
<tr><td>14.</td><td colspan="2">Distribution of available time:</td><td colspan="2">30+0+15+5+10 = 60 hours</td></tr>
<tr><td>15.</td><td>Forms of teaching activities</td><td>15.1.</td><td>Lectures- theoretical classes</td><td>30 hours</td></tr>
</table>

		15.2.	Practice(laboratory, auditory) seminars, team work	
16.	Other forms of activities	16.1.	Project tasks	15 hours
		16.2.	Individual tasks	5 hours
		16.3.	Homework	10 hours

17.	Forms of assessment		
	17.1.	Tests	40
	17.2.	Seminar paper/project (presentation: oral and written)	10
	17.3.	Activity and participation	20
	17.4.	Oral exam	30

18.	Criteria for assessment (points /grade)	to 50 points	5 (F)
		from 51 to 60 points	6 (E)
		from 61 to 70points	7 (D)
		from 71to 80 points	8 (C)
		from 81to 90 points	9 (B)
		from 91 to 100 points	10 (A)
19.	Condition for getting a signature and taking the final exam	60% success from all pre-exam activities or 42 points from the mid-term tests and the seminar paper as well as attendance and participation in class	
20.	Language in which the classes are conducted	English	
21.	Method of monitoring the quality of instruction	Self-evaluation	

22.	Literature:					
	22.1.	Compulsory literature				
		Ordinal number	Author	Title	Publisher	Year
		1.	Cicchetti,D.& D.J. Cohen, D.J. (Eds.)	*Developmental psychopathology,* *Vol 1,Theory and Method* *Vol 2, Developmental neuroscience* *Vol 3, Risk, Disorder, and Adaption*	Hoboken, New Jersey: John Wiley & Sons, Inc	2006
		2.	Haugaard, J.J.	*Child Psychopathology*	New York, NY: McGraw Hill	2008

					Education	
		3.	Милошева, Л.	*Развојна психологија*	Штип: УГД	2013
	22.2.	Additional literature				
		Ordinal number	Author	Title	Publisher	Year
		1.	Berk, L.	*Child Development*	Pearson	2013
		2.	Patterson, C.J.	*Infancy&Childhood*	New York, NY: McGraw Hill	2009
		3.	Siegler, R.S., DeLoache, J.S. & Eisenberg, N.	*How Children Develop (2nd Ed.)*	New York: Worth	2010

Annex No.3	Program of the Course - first/second/third cyclestudies

1.	**Title of the Course**	**Contemporary diagnostic methods in medicine**			
2.	**Code**	3MF111612			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev – Shtip Faculty of medical sciences Department of radiology			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	fifth	**7.**	**Number of credits**	2
8.	**Professor (s)**	Tane Markoski, PhD			
9.	**Requirements for enrollment the Course**	Enrolled third year			
10.	**Purposes of the curriculum (competencies):** Knowledge of a up to date diagnostic methods, with main purpose early diagnosis and treatment of the diseases				

<table>
<tr><td></td><td colspan="4"></td></tr>
<tr><td>11.</td><td colspan="4">Content of the course program:

• Conventional diagnostic methods
• Digital diagnostic methods
• Optical diagnostic method
• Basic principles of US
• Basic principles of CT
• MRI and MR images in the diagnosis of a diseases
• Modern diagnostic method in the diagnosis of respiratory tract
• Modern diagnostic method in the diagnosis of cardiovascular system
• Diagnostic method in the digestive tract
• Diagnostic method in the biliary tract
• Diagnostic method in the genitourinary tract
• Diagnostic method in the central and peripheral nervous system</td></tr>
<tr><td>12.</td><td colspan="4">Learning methods:

Lecture with oral an visual presentations, exercises in small group, seminar works and other activities according program and criteria proposed by EKTC

–</td></tr>
<tr><td>13.</td><td colspan="2">Total available time</td><td colspan="2">2 ECTS x 30 h = 60 hours</td></tr>
<tr><td>14.</td><td colspan="2">Distribution of available time</td><td colspan="2">30+0+15+5+10 = 60 hours</td></tr>
<tr><td rowspan="2">15.</td><td rowspan="2">Forms of teaching / learning activities</td><td>15.1.</td><td>lectures / theoretical - contact teaching,

e-teaching</td><td>30 hours</td></tr>
<tr><td>15.2.</td><td>theoretical and practical exercises,</td><td></td></tr>
</table>

			e-exams, preparation of independent seminar work	/
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**5 hours**
		16.3.	**Home learning**	**10 hours**

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**

18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	**Active following of the lecture and exercise and minimum scour of 42 points before final exam**	
20.	**Language ofteaching / study**	English	
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**	

22.	Literature					
	22.1.	Required literature				
		No.	Author	Title	Publisher	Year
		1.	P. Hu et al.	Modern Clinical Techniques	Springer	2012
		2.				
		3.				
	22.2.	Additional literature				
		No.	Author	Title	Publisher	Year
		1.				
		2.				
		3.				

Annex No.3	Program of the Course - first cycle studies

1.	Title of the Course	**Pathophysiology 2**			
2.	Code	3MF103212			
3.	Study Program	General Medicine			
4.	Organizer of the study program unit or institute, Faculty, department)	University Goce Delcev Faculty of Medical sciences			
5.	Cycle (first, second and third cycle)	Integrated studies first and second cycle			
6.	Academic year / semester	sixth semester	7.	Number of credits	6
8.	Professor (s)	Prof. dr. Zoran Handziski			
9.	Requirements for enrollment the Course	Finished 5th and enrolled 6th semester			
10.	Purposes ofthe curriculum (competencies): Introducing the studentswith the etiological factorsanddisorders ofthe function ofindividualorgan systems.				
11.	Content ofthecourse program: Theoreticalstudyunits: •Physicaletiological factors • Chemicaletiological factors • Biologicaletiological factors				

	• Disordersof the structure and function of connective and bone tissue. Pathophysiology of skin • Disorders of the composition and function of blood anD blood-forming organs • Disorders of the heart • Disorders of blood pressure and flow • Breathingdisorders • Disordersof renal function • Pathophysiologyof the gastrointestinalsystem. Disorders of the hepatobiliary system • Endocrinopathy • Disordersof motor and sensory functions of the nervous system. Disorders of brain function. Practical teaching units: Disorders ofhemostasis Disorders erythropoiesisandleucopoiesis. Pathologic differential blood count ECG in the diagnosis of cardiac disorders Disorders of ventilation capabilities.Diagnostics with dynamics pirometry Pathophysiology of hepatobiliary system Pathophysiology of the exocrine pancreas Tests for the detection of disorders of renal function Disorders of the thyroid and parathyroid gland	
12.	Learning methods: Interactive teaching oflectures and tutorials,practical exercises.	
13.	Total available time	6 ECTS x 30 h = 180 hours
14.	Distribution of available time	45+30+15+30+60 = 180 hours

15.	Forms of teaching / learning activities	15.1.	lectures / theoretical - contact teaching, e-teaching	45hours
		15.2.	theoretical andpractical exercises, e-exams, preparationofindependentseminar work	30 hours
16.	Other forms of activities	16.1.	Project tasks	15 hours
		16.2.	Individual tasks	30 hours
		16.3.	Home learning	60 hours

17.	Method of assessment		
	17.1.	Tests / oral exams	70 points
	17.2.	Seminars (paper/project - presentation: written and/or oral)	10 points
	17.3.	Activity and participation	20 points

18.	Assessment Criteria (points /score)	up 50points	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.	Signature requirement and passing the final exam	• The methodof assessment isbasedonthecumulation ofpointsscored: lectures, tutorials,colloquiaandseminar work; • colloquia are independent of each	

		other,i.e.passing one is not a prerequisite for taking other colloquium; • The final exam also does not depend on colloquiums, they are not a requirement for passing the inale xam, but the total number of points scored, which should not be less than 42 points; • Incase of insufficient number of points for passing the final exam, the professor can arrange additional colloquium or additional activity when ith as a sufficient number of candidates.
20.	Language of teaching / study	English
21.	Method of monitoring the quality of teaching	Self-evaluation

22.	Literature					
	22.1.	Required literature				
		No.	Author	Title	Publisher	Year
		1.	Gamulin S et all.	Pathophysiology	6th edition , Zagreb	2005
		2.	Vaskova O et all.	Practicum in general and special pathological physiology	Skopje	
		3.	Tadzer I et all.	Special pathological physiology	Belgrade	
	22.2.	Additional literature				
		No.	Author	Title	Publisher	Year

		1.				
		2.				

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Anatomic Pathology 2**			
2.	**Code**	3MF102912			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences Department of Pathology			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	sixth semester	**7.**	**Number of credits**	6
8.	**Professor (s)**	Prof. Gordana Petrushevska, MD, PhD			
9.	**Requirements for enrollment the Course**	Taken course of: Pathology 1			
10.	**Purposes ofthe curriculum (competencies):**Acquiring knowledge about etiology, mechanisms and morphological changes in cells and tissues of the human organism under the influence of pathological agents and diagnosis of that changes				
11.	**Content of the course program:**				

	1. Pathology of the Heart; 2. Pathology of the Respiratory System; 3. Pathology of the Kidney and Its Collecting System; 4. Pathology of the Liver, Gallbladder, and Biliary Tract; 5. Pathology of the Pancreas; 6. Pathology of the Male Genital System; 7. Pathology of the Female Genital System and Breast; 8. Pathology of the Endocrine System; 9. Pathology of the Musculoskeletal System; 10. Pathology of the Skin; 11. Pathology of the CNS;			
12.	**Learning methods:** Theoretical Lectures, Practical Exercises, Term papers, Individual Presentation;			
13.	**Total available time**		6 ECTS x 30 h = 180 hours	
14.	**Distribution of available time**		50+30+15+30+60 = 180 hours	
15.	**Forms of teaching /**	**15.1.**	**lectures / theoretical - contact teaching,**	50 h

	learning activities		**e-teaching**	
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	30 h
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**30 hours**
		16.3.	**Home learning**	**60 hours**

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**

18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	Taken and succesfully passed subject Pathology 1	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**	

22.	Literature					
	22.1.	Required literature				
		No.	Author	Title	Publisher	Year
		1.	Kumar, Abbas, Fausto, Mitchell	Robbins Basis of Pathology, 8th	Saunders, Elsevier	2010
		2.	Eduard K. Klatt	Robbins and Cotran Atlas of Pathology	Saunders, Elsevier	2009
		3.	Authorized Lectures			
	22.2.	Additional literature				
		No.	Author	Title	Publisher	Year
		1.				
		2.				
		3.				

Annex No.3	**Program of the Course - Firstcyclestudies**				
1.	**Title of the Course**	**Pharmacology and Toxicology 2**			
2.	**Code**	3MF113012			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University “Goce Delcev” Faculty of Medical Sciences Department of Medicine			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	sixth semester	**7.**	**Number of credits**	5
8.	**Professor (s)**	Professor dr. Stojmir Petrov			
9.	**Requirements for enrollment the Course**	Enrolled third year			
10.	**Purposes of the curriculum (competencies):** To introduce students with special pharmacology of the organic systems and to provide a review of the most basic characteristics of most drugs that are now used in everyday practice				
11.	**Content ofthecourse program:** • Pharmacology of CNS				

<table>
<tr><td></td><td colspan="4">Psychopharmacology
Pharmacology of the autonomous nervous system
Pharmacology of the respiratory system
Pharmacology of the cardiovascular system
Pharmacology of blood
Pharmacology of digestiven system
Pharmacology of the kidneys
Pharmacology of hormones
Pharmacology ofvitamins
Pharmacology of chemotherapy
Toxicology</td></tr>
<tr><td>12.</td><td colspan="4">Learning methods:

- Research, working in small groups, homework, practical work, independent seminar work, discussion, debate, individual tasks</td></tr>
<tr><td>13.</td><td colspan="2">Total available time</td><td colspan="2">5 ECTS x 30 h = 150 hours</td></tr>
<tr><td>14.</td><td colspan="2">Distribution of available time</td><td colspan="2">45+30+15+15+45 = 150 hours</td></tr>
<tr><td>15.</td><td>Forms of teaching / learning activities</td><td>15.1.</td><td>lectures / theoretical - contact teaching,
e-teaching</td><td>45 hours</td></tr>
<tr><td></td><td></td><td>15.2.</td><td>theoretical and practical exercises,
e-exams, preparation of independent seminar work</td><td>30 hours</td></tr>
<tr><td>16.</td><td>Other activities</td><td>16.1.</td><td>Project tasks</td><td>15 hours</td></tr>
<tr><td></td><td></td><td>16.2.</td><td>Individual tasks</td><td>15 hours</td></tr>
<tr><td></td><td></td><td>16.3.</td><td>Home learning</td><td>45 hours</td></tr>
<tr><td>17.</td><td colspan="4">Method of assessment</td></tr>
<tr><td></td><td>17.1.</td><td colspan="2">Tests / oral exams</td><td>70 points</td></tr>
<tr><td></td><td>17.2.</td><td colspan="2">Seminars (paper/project - presentation: written</td><td>10 points</td></tr>
</table>

		and/or oral)	
	17.3.	**Activity and participation**	**20 points**
18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	60% success of all pre-exam activities ie 42 points from the two colloquia, independent seminar work, regularity of theoretical andpractical exercises	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**	

22.	**Literature**					
		Required literature				
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.1.	**1.**	Rang HP, Dale MM, Ritter JM, Moore PK	PHARMACOLOGY, translation	Churchill Livingstone	London 2005
		2.				
		3.				
	22.2.	**Additional literature**				

		No.	Author	Title	Publisher	Year
		1.	Goodman & Gilman's	The Pharmacological basis of Therapeutics; last edition		
		2.	Vladislav M. Varagic, Milenko Milosevic	Pharmacology		2005
		3.				

Annex No.3	Program of the Course – first cycle studies				
1.	Title of the Course	**Clinical examination 2**			
2.	Code	3MF108112			
3.	Study Program	General Medicine			
4.	Organizer of the study program (unit or institute, Faculty, department	University GoceDelcev Faculty of Medical science			
5.	Cycle (first, second and third cycle)	Integrated studies first and second cycle			
6.	Academic year/ semester	sixth	7.	Number of credits	5
8.	Professor (s)	Prof. d-r Andreja Arsovski			
9.	Requirements for enrolment the Course	Enrolled third year			
10.	Purposes of the curriculum (competencies): • Mastering of theoretical knowledge and application of the key skills for successful examination of patients.				
11.	Content of the course programme • Medical history • Fundamentals of clinical examination o General clinic examination o Clinical examination of the head and o Clinical examination of the chest, lungs and o Clinical examination of abdomen o Clinical examination of the urogenital tract o Clinical examination of extremities • Characteristics of clinical presentation and Paraclinical tests diseases: o Cardiovascular System o Respiratory System o Gastrointestinal System o Endocrine system o Haematologicaldeseases o Diseases of bone-joint system (rheumatic diseases) o Urogenital system o Clinical characteristics of poisoning (toxicology)				

12.	Learning methods: interactive lectures, practical classes, project work			
13.	Total available time		5 ECTS x 30 h = 150 hours	
14.	Distribution of available time		30+30+15+15+60 = 150 hours	
15.	Forms of teaching/learning activities	15.1.	Lectures – theoretical	30 hours
		15.2.	Exercises (laboratory, auditorial), seminars, teamwork	30 hours
16.	Other forms of activities	16.1.	Project tasks	15 hours
		16.2.	Individual tasks	15 hours
		16.3.	Home learning	60 hours

17.	Method of assessment		
	17.1.	Presence and activity classes	max10points
	17.2	Presence and activity exercises	max 10 points
	17.3	Continuous verification tests	Max 2 x20 points
	17.4	Seminar work/ project (presentation: written and oral) optional	max 10 points
	17.5	Practical part of the exam	max 10 points
	17.6	Oral part of the exam	max30 points

18.	Assessment Criteria (points /score)	up 50points	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.	Signature requirement and passing the final exam	Completed a minimum of 42 points of presence and activity of lectures, practical experience andtests	
20.	Language o fteaching / study	English	

21.	Method of monitoring the quality of teaching	Self-evaluation

22.	Literature					
	22.1.	Required literature				
		No	Author	Title	Publisher	Year
		1.				
		2.	Stefan J. McFee, William f. Genong	Pathophysiology of Disease> An introduction to Clinical Medicine (5th edition)	Tabernakul	2010
	22.2.	Additional literature				
		No.	Author	Title	Publisher	Year

Article Number 3	**Study program from the first cycle of studies**				
1.	Name of the subject	**Epidemiology**			
2.	Code	3MF120412			
3.	Study program	General medicine			
4.	Organiser of the study program (unit i.e. institute, department)	University of Goce Delcev Faculty of Medical Sciences			
5.	Level (first, second, third cycle of studies)	Integrated studies first and second cycle			
6.	Academic year / Semester	Sixth semester	7.	Credits	4
8.	Associate Professor	Professor D-r Milka Zdravkovska			
9.	Preconditions for enrolling in the subject	Enrolled third year			
10.	Aims of the study program (competencies): Acquisition of knowledge for general and specific epidemiology and prevention of infectious and non infectious disease				
11.	The content of the study program: <u>Theoretical study units:</u> • Epidemiological methods: descriptive, analytical and experimental • Epidemiological process, forms of appearance, epidemiological models for occurrence of disease • Occurrence of infection and infectious disease, mechanisms of occurrence and ways of transmission of infectious disease: characteristics of hydric epidemic, alimentary, aerogenic, contact and transmissive epidemics • Prevention of disease: primary, secondary and tertiary; epidemiologic supervision • Immunization, seroprophylaxis and chemoprophylaxis • Intrahospital infections; disinfection, disinsection and deratisation • Epidemiological characteristics of infectious intestine disease: acute enterocolitis, bacillary dysentery, salmonelosis, staphylococcal poisoning, intestinal typhus and paratyphus, cholera, botulism, poliomyelitis, viral hepatitis A, B, C, E, G, D;				

	• Epidemiological characteristics of infectious respiratory disease: varicella, morbilli, variola vera, rubeola, parotitis, infectious mononucleosis, influenza, diphtheria, acute streptococcal infection, pertussis, meningococcal meningitis, tuberculosis • Epidemiological characteristics of infectious contact disease: trichomoniasis, leprosy, ebola, gonorrhea, syphilis, HPV infection, AIDS • Epidemiological characteristics of infectious transmissive disease: blotchy typhus, recurring fever, malaria, yellow fever; epidemiological characteristics of zoonosis: tetanus, brucellosis, anthrax, tularemia, plague, rabies • Epidemiological characteristics of non infectious chronic disease: chronic obstructive pulmonary disease, cardiovascular disease, cerebrovascular disease • Epidemiological characteristics of malignant neoplasm, diabetes, addiction diseases; epidemiological characteristics of violent death: murders, suicides and accidents <u>Practical study units:</u> • Epidemiological methods and design of studies • Ways of collecting data, epidemiological survey, sample and defining the size of the sample • Epidemiological process, forms of epidemiological process, epidemiological models for occurrence of disease • Epidemiological characteristics and samples of hydric, alimentary, aerogenic, contact and transmissive epidemics • Immunization: obligatory vaccinations and vaccination by epidemiological indications • Prevention during professional exposition • Epidemiologic characteristics of infectious intestine disease: bacillary dysentery, salmonelosis, staphylococcal poisoning, cholera, botulism, viral hepatitis A, B, C • Epidemiological characteristics of infectious respiratory disease: varicella, morbilli, variola vera, rubeola, parotitis, influenza, acute streptococcal infection, pertussis, tuberculosis • Epidemiological characteristics of infectious contact disease: trichomoniasis, gonorrhea, syphilis, HPV infection, AIDS • Epidemiological characteristics of infectious transmissive disease: malaria, yellow fever; epidemiological characteristics of zoonosis: tetanus, brucellosis, anthrax, rabies • Epidemiological characteristics of non infectious chronic disease: chronic obstructive pulmonary disease, cardiovascular disease • Epidemiological characteristics of malignant neoplasm, diabetes, addiction diseases	
12.	Teaching methods: Lectures, exercises, group discussionsmethods, individual assignments, seminar papers, presentation of scientific papers;	
13.	Total time available	4 ECTS x 30 h = 120 hours

14.	Allocation of the available time		30+15+15+15+45 = 120 hours	
15.	Forms of teaching activities	15.1.	Lectures- theoretical education	30 hours
		15.2.	Exercises (laboratory auditory), seminar papers, teamwork	15 hours
16.	Other forms of activities	16.1.	Project assignments	15 hours
		16.2.	Individual assignments	15 hours
		16.3.	Studying at home	45 hours
17.	Method of evaluation			
	17.1.	Tests and a final oral exam		70 points
	17.2.	Seminar paper/project (presentation: Written and oral)		10 points
	17.3.	Activity and participation		20 points
18.	Criteria for evaluating (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.	Signature requirement and taking the final exam		For a signature - presence of at least 7 (60%) lectures and 10 exercises; For the final exam - scored at least 42 points on all grounds;	
20.	Language ofteaching		English	
21.	Method of monitoring the quality of teaching		Self evaluation	

22.	Literature

	22.1	Compulsory literature				
		Ordinal number	Author	Title	Publisher	Year
		1.				
		2.	Danilovski, D, Orovcanec, N., Vasilevska K, Tausanova B	Basic Epidemiology		2007
		3.				
	22.2	Additional literature				
		No.	Author	Title	Publisher	Year
		1.				
		2.				
		3.				

Annex No.3	Program of the Course - first cycle studies				
1.	**Title of the Course**	Medical english			
2.	**Code**				
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	sixth semester	**7.**	**Number of credits**	2
8.	**Professor (s)**	Lecturer Dragan Donev			
9.	**Requirements for enrollment the Course**	enrolled third year			
10.	**Purposes ofthe curriculum (competencies):**The aim of the course is to enable students to supplement and expand their language skills and touse them in specific situations verbal field of medicine through the use of appropriate integrated linguistic features of discourse analysis.				
11.	**Content ofthecourse program:** 1.Introduction to the subject's matter				

	2.Human body 3. Exercisesof the materialfrom the previousclass 4. Locomotorsystem 5. Exercisesof the materialfrom the previousclass 6. Sensorysystem 7. Exercisesof the materialfrom the previousclass 8. Nervoussystem 9. Exercisesof the materialfrom the previousclass 10. Respiratorysystem 11. Exercisesof the materialfrom the previousclass 12. Presentingpapers			
12.	**Learning methods:** seminars, interactivemethod: group work, lectures, homework, papers, discussion, debate, cooperativelearningtechniques, individual tasks, simulationextracurriculareducationalactivities, independent learning. ;			
13.	**Total available time**		2 ECTS x 30 h = 60 hours	
14.	**Distribution of available time**		15+15+15+10+10 = 60 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**Lectures - theoretical teaching**	15 h
		15.2.	Exercises(laboratory, theoretical), seminars, teamwork	15 h
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**10 hours**
		16.3.	**Home learning**	**10 hours**
17.	**Method of assessment**			

	17.1.	**Tests**		**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**		**10 points**
	17.3.	**Activity and participation**		**20 points**
18.	**Assessment Criteria(points /score)**		**up 50points**	**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.	**Signature requirement and passing the final exam**		up 51 to 60 points	6
			Up 61 to 70 points	7
			up 71 to80 points	8
			up81 to90 points	9
			up91 to100 points	10
			60% of the success of the pre-test activities, and 42points from two colloquia, seminars, attendance at lectures and exercises	

20.	**Language of teaching / study**	English
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	**Pandora Dimovska**	**English for medical and dental**	**UKIM**	**Skopje, 2000**
		2.				
		3.				
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				
		2.				
		3.				

Annex No.3	Program of the Course - First cycle studies				
1.	**Title of the Course**	**Basic concepts in clinical pharmacology**			
2.	**Code**	**3MF110512**			
3.	**Study Program**	Medicine 2013/2014			
4.	**Organizer of the study program(unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical science Medicine			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	sixth semester	**7.**	**Number of credits**	2
8.	**Professor (s)**	Professor dr. Stojmir Petrov			
9.	**Requirements for enrollment the Course**	Enrolled third year			
10.	**Purposes of the curriculum (competencies):** Introduction tothe subject and objectives of clinical pharmacology and its practically meaning in contemporary therapy				
11.	**Content of the course program:** 1. Place andmeaningofclinicalpharmacology				

	2. Aimsandbasic principles of clinicalpharmacology 3. Phases andmethodsfor clinicaltestingof new drugs 4. Ethicsandlegislation 5. Practical meaningofpharmacokineticsin therapy 6. Use ofdrugs inold people 7. Use ofdrugsin children 8. Use ofdrugsinpregnancyandlactation 9. Use ofdrugs in damaged kidneys 10. Use ofdrugs in dameged liver 11. Clinical meaning ofinteractionsbetweendrugs 12. Organizedmonitoringofadverse reactionstodrugs			
12.	**Learning methods:** - Research, working in small groups, homework, practical work, independent seminar work, discussion, debate, individual tasks			
13.	**Total available time**		2 ECTS x 30 h = 60 hours	
14.	**Distribution of available time**		30+0+15+5+10 = 60 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	30 h
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	-
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2	**Individual tasks**	5 hours

		.		
		16.3.	Home learning	10 hours
17.	Method of assessment			
	17.1.	Tests / oral exams		70 points
	17.2.	Seminars (paper/project - presentation: written and/or oral)		10 points
	17.3.	Activity and participation		20 points
18.	Assessment Criteria (points /score)		up 50points	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.	Signature requirement and passing the final exam	60% success of all pre-exam activities ie 42 points from the two colloquial, independent seminar work, regularity of theoretical andpractical exercises		
20.	Language of teaching / study	English		
21.	Method of monitoring the quality of teaching	Self-evaluation		

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Tomislav Kazic	Pharmacology - clinical pharmacology		
		2.	Desmond Laurence, Peter Bennett	Clinical pharmacology		
		3.	Bertram Katzung	Basic and Clinical pharmacology		
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Rang HP, Dale MM, Ritter JM, Moore PK	PHARMACOLOGY, translation	Churchill Livingstone	Лондон, 2005
		2.	Goodman & Gilman's	The pharmacological basis of therapeutics		
		3.				

Annex No.3	Program of the Course – first cycle studies

1.	**Title of the Course**	**Clinical Biochemistry**			
2.	**Code**				
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	Faculty of Medical Sciences Goce Delcev University - Stip			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	sixth semester	**7.**	**Number of credits**	2
8.	**Professor (s)**	Assistant Professor Tatjana Ruskovska, PhD			
9.	**Requirements for enrollment the Course**	Enrolled third year			
10.	**Purposes ofthe curriculum (competencies):** Introduction totheworkandanalytical methodsinclinical-biochemistrylaboratories. Diagnostic significanceof the results of clinical-biochemistry analyzes.				
11.	**Content of the course program:** Theoretical tuition				

	1. Stages in thework processina clinical-biochemistry laboratory. 2. Clinical-biochemistry methods of diagnosis and monitoring of Diabetes mellitus, part one. 3. Clinical-biochemistry methods of diagnosis and monitoring of Diabetes mellitus, part two. 4. Clinical-biochemistrymethodsofdiagnosis andmonitoringoftreatmentofdyslipidemia, part one. 5. Clinical-biochemistrymethodsofdiagnosis andmonitoringoftreatmentofdyslipidemia, part two. 6. Specific proteins: diagnosticsignificanceand methodsfor theirdetermination. 7. Products of degradation: diagnosticsignificanceand methodsfor theirdetermination. 8. Fundamentals of clinicalenzymology: theoretical basics. 9. Diagnostic significanceof someimportantenzymes. 10. Electrolytes andgasanalysis. 11. Serum iron concentration, TIBC, transferrinandferritin: diagnosticsignificanceand methodsfor theirdetermination. 12. Enzyme-immunochemical methods. <u>Practical tuition</u> 1. Closed blood sampling system. Use of pipette and pipetting techniques. Photometry and centrifugation techniques. 2. Determination of glucose concentration in serum with GOD-PAP method. 3. Determination of glucose concentration in serum with hexokinase method. 4. Determination of the concentration of total cholesterol and triacylglycerols. 5. Determination of the concentration of HDL cholesterol and LDL cholesterol. 6. Determination of total protein and albumin in serum. Laser

<table>
<tr><td></td><td colspan="4">nephelometer.
7. Determination of urea and creatinine in serum and urine.
8. Determination of the activity of AST and ALT in serum.
9. Determination of the activity of amylase in serum and urine.
10. Determination of the concentration of sodium and potassium in serum and urine.
11. Determination of iron concentration and TIBC in serum.
12. Determination of cortisol with EIA method.</td></tr>
<tr><td>12.</td><td colspan="4">Learning methods:

<u>Theoretical tuition</u>

- Interactive teaching: Lectures in large group and discussions with students.
- Multimedia teaching.
- E-learning.
- Individual consultations with students and consultations in groups.

<u>Practical tuition</u>

- Practical laboratory exercises in small groups.
- Theoretical discussion about experiments.
- Final practical work.</td></tr>
<tr><td>13.</td><td colspan="2">Total available time</td><td colspan="2">2 ECTS x 30 h = 60 hours</td></tr>
<tr><td>14.</td><td colspan="2">Distribution of available time</td><td colspan="2">30+0+15+5+10 = 60 hours</td></tr>
<tr><td rowspan="2">15.</td><td rowspan="2">Forms of teaching / learning activities</td><td>15.1.</td><td>lectures / theoretical - contact teaching,
e-teaching</td><td>30 hours</td></tr>
<tr><td>15.2.</td><td>theoretical and practical exercises,</td><td></td></tr>
</table>

			e-exams, preparation of independent seminar work	
16.	**Other activities**	**16.1.**	**Project tasks**	15 hours
		16.2.	**Individual tasks**	5 hours
		16.3.	**Home learning**	10 hours

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	70 points
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	10 points
	17.3.	**Activity and participation**	20 points

18.	**Assessment Criteria (points /score)**	**up 50points**	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.	**Signature requirement and passing the final exam**	At least 42 points from all pre-exam activities	
20.	**Language o fteaching / study**	English	
21.	**Method of monitoring the quality of teaching**	Self-evaluation	

22.	**Literature**

	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Carl A. Burtis, Edward R. Ashwood, David E. Bruns	TIETZ, Fundamentals of Clinical Chemistry, 6th edition	Saunders, Elsevier	2008
		2.	Ruskovska Tatjana	Clinical biochemistry	Script for intern use	2010
		3.	M. Bichop, E. P. Foddy et al	Clinical chemistry (principles, procedures and correlations) – Fifth edition	Prosvetno delo, Skopje Translated book – Project of the Government - Republic of Macedonia	2009
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				

Annex No.3	Program of the Course - firstcyclestudies				
1.	**Title of the Course**	**Clinical Microbiology**			
2.	**Code**	3MF110412			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences Department of Microbiology			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	Sixth	**7.**	**Number of credits**	2
8.	**Professor (s)**	Ass. Prof. Vaso Taleski, MD, D-r Sc.			
9.	**Requirements for enrollment the Course**	Passed exam on Microbiology and parasitology 2			
10.	**Purposes ofthe curriculum (competencies):** Basic aim of the course programis to introduce and enable students to acquire theoretical and practical knowledge about classical/ routine and advanced/modern methods and diagnostic procedures in microbiology testing of biological materials and most important agents/ microorganisms of infectious diseases (bacteria, fungi, viruses, parasites).				
11.	**Content ofthecourse program:** • Role of the microbiology lab in diagnosis of infectious diseases; Diagnostic cycle • Spreading of microorganisms. Presence of microorganisms on/in healthy				

	persons. Sampling and delivering of samples, most common samples, • Microscopic testing, culturing, Rapid tests • Susceptibility testing of bacteria in vitro /antibiogram, • Immunological methods in microbiology, Agglutination, Precipitation, Complement fixation, Inhibition of haemolysis, Methods of neutralization, • Diagnostic tests with marked antibodies or antigens • Immunofluorescence (DIF, IIF), ELISA, Western blot • Diagnosis of bacterial infections • Diagnosis of fungi infections • Diagnosis of parasitic infections • Diagnosis of viral infections • Polymerase chain reaction (PCR).			
12.	**Learning methods:** Methods of oral and visual learning/presentations and practical work in the lab.			
13.	**Total available time**		3 ECTS x 30 h = 60 hours	
14.	**Distribution of available time**		30+0+15+5+10 = 60 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	30 hours
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	0 hours
16.	**Other activities**	**16.1.**	**Project tasks**	15 hours
		16.2.	**Individual tasks**	5 hours
		16.3.	**Home learning**	10 hours
17.	**Method of assessment**			
	17.1.	**Tests**		40 points
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**		10 points
	17.3.	**Activity and participation during lecturing**		10 points
	17.4	**Activity and participation during lab practical work**		10 points

	17.5	**Final exam**	30 points
18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	Requirements for signature: presence at lecturing and practical work. Requirements for final exam: Passed exam on Microbiology and parasitology 2, at least 42 points from two colloquia, presence at lecturing, practical lab work and seminars (paper/project - presentation. Colloquia are not conditionally connected. For students with points over 37 and less than 42, professor could organize additional colloquium with maximum of 10 additional points	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	Student evaluation Self-evaluation	

22.	**Literature**					
		Required literature				
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.1.	**1.**	Greenwood D. et all.	Medical microbiology	Project of the Governament of the Republic of	17-eddition, 2006,

					Macedonia, for translation of vocational and scientific books	Translated in 2011
		2.	Panovski N. et all. Guest / invited author: Vaso Taleski	Medical microbiology - General part	Institute of Microbiology and parasitology, Medical faculty Skopje.	2011
		3.	Panovski N. et all. Guest / invited author: Vaso Taleski	Medical microbiology - Special part	Institute of Microbiology and parasito-logy, Medical faculty Skopje.	2011
		4.	Jawetz, Melnick, & Adelberg	**"**Medical Microbiology"	The McGraw-Hill Companies	24th ed., 2007
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	P. Murray & Y. Shea.	" Guide to Clinical Microbiology"	3rd ed, ASM press, Washington DC, USA	2004
		2.	Vaso Taleski	"Diagnostic procedures in microbiology"	Authorized presentations	2008
		3.	Milena Petrovska et all.	Handbook on medical microbiology	Institute of Microbiology and	5th edd.

				and parasitology	parasitology, Medical faculty Skopje	2010

Annex No.3	Program of the Course - first cycle studies				
1.	**Title of the Course**	**Internal Medicine 1**			
2.	**Code**	3MF106712			
3.	**Study Program**	**General Medicine**			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	**University Goce Delcev, Stip** **Faculty of Medical Sciences**			
5.	**Cycle (first, second and third cycle)**	**Integrated studies first and second cycle**			
6.	**Academic year / semester**	**seventh**	**7.**	**Number of credits**	**9**
8.	**Professor (s)**	Biljana Ilievska Popovska Assistant professor			
9.	**Requirements for enrolment the Course**	Completion of the following courses: Clinical investigation 2, Pharmacology with Toxicology, Anatomic Pathology and Pathophysiology 2.			
10.	**Purposes ofthe curriculum (competencies):** • Mastering the art of rational diagnosis and therapeutic treatment based on etiopathogenetic fundamentals and basics of clinical pharmacology • Mastering the art of rational clinical evaluation and treatment of diseases of the cardiovascular system, respiratory diseases, nephrological and rheumatologic diseases. • Mastering the art of rational use of Paraclinical investigations that lead to the diagnosis of diseases • Mastering the art of rational treatment based on the principles of evidence based medicine and guided by the Recommendations for disease treatment				
11.	**Content of the course program:** • Diseases and conditions of the cardiovascular system(5 units)				

<table>
<tr><td></td><td colspan="4">Respiratory diseases (4 units)
Nephrology diseases (4 units)
Rheumatology diseases and conditions (3 units)</td></tr>
<tr><td>12.</td><td colspan="4">Learning methods: interactive lectures, practical classes, project work</td></tr>
<tr><td>13.</td><td colspan="2">Total available time</td><td colspan="2">9 ECTS x 30 h = 270 hours</td></tr>
<tr><td>14.</td><td colspan="2">Distribution of available time</td><td colspan="2">120+120+15+0+15 = 270 hours</td></tr>
<tr><td rowspan="2">15.</td><td rowspan="2">Forms of teaching / learning activities / per week</td><td>15.1.</td><td>Lectures / theoretical - interactive teaching</td><td>120 hours</td></tr>
<tr><td>15.2.</td><td>Practical exercises,
e-learning, preparationofindependentseminar work</td><td>120 hours</td></tr>
<tr><td rowspan="3">16.</td><td rowspan="3">Other forms of activities</td><td>16.1.</td><td>Project tasks</td><td>15 hours</td></tr>
<tr><td>16.2.</td><td>Individual tasks</td><td>/</td></tr>
<tr><td>16.3.</td><td>Home learning</td><td>15 hours</td></tr>
<tr><td rowspan="6">17.</td><td colspan="4">Method of assessment</td></tr>
<tr><td>17.1.</td><td colspan="2">Attendance to the lectures and active participation</td><td>maximum 10 points</td></tr>
<tr><td>17.2.</td><td colspan="2">Attendance to the practical lessons and active participation</td><td>maximum 10 points</td></tr>
<tr><td>17.3</td><td colspan="2">Continuous knowledge checking</td><td>maximum 2x20 points</td></tr>
<tr><td>17.4.</td><td colspan="2">Seminars (paper/project - presentation: written and/or oral) optional</td><td>maximum 10 points</td></tr>
<tr><td>17.5.</td><td colspan="2">Practical exam</td><td>maximum 10 points</td></tr>
<tr><td></td><td>17.6</td><td colspan="2">Final Exam</td><td>maximum 30 points</td></tr>
<tr><td>18.</td><td colspan="2">Assessment</td><td>up 50points</td><td>5(five) (F)</td></tr>
</table>

	Criteria(points /score)	**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.	**Signature requirement and passing the final exam**	Cumulative score of 60% of all required activities (midterm tests, attendance and seminar papers)	
20.	**Language of teaching / study**	English	
21.	**Method o fmonitoring the quality of teaching**	Self-evaluation	

22.	**Literature**					
		Required literature				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				
	22.1.	**2.**	Faucu D.L, Kasper D.L. LondoD.L. Braunwald E, HauserS.L. JamesonJ.L. LascalroJ.	Harrison's principles of internal Medicine (Atlas), 17 -th edition	"Tabenakul" Skopje	2013
		Additional literature				
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.2.	**1.**	Charles D, Forbs, William F, Dzekson.		"Margo" Skopje	2010
		2.	Ljubica Georgievska Ismail, Lidija Poposka, Ivan Trajkov, Nikola Gjorgov	Electrocardiography	Skopje: (COBISS. MK-ID 71834122)	2008

		3.				

Annex No.3	Course Description - first cycle studies

1.	**Course title**	**Infective diseases 1**			
2.	**Course code**	3MF107 112			
3.	**Study Program**	General Medicine			
4.	**Organizer (unit or institute, faculty, department)**	University Goce Delcev - Stip Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	seventh	**7.**	**Number of credits**	5
8.	**Instructor (s)**	Velo Markovski, PhD			
9.	**Course enrolment prerequisites**	Immunology and Microbiology course completion			
10.	**Course objectives (competencies):** to gain knowledge of general Infectious diseases, infectious agents, protection from infections and infectious diseases, immune response infection, diagnosis and treatment of infectious diseases, the most important syndromes in Infectious diseases, intestinal infections and viral hepatitis				
11.	**Course contents:** 1. Infection, infectious disease (basic features), temperature, types and regulation 2. Immunology in infectious diseases				

	3. Basic principles of diagnosis, treatment and prevention of infectious diseases 4. Antibiotics, antiviral drugs, antimicotic and antiparasite drugs 5. Bacteremia, sepsis and septic shock 6. The most important syndromes by Infectious diseases 7. Etiology, epidemiology and significance of gastrointestinal infections 8. Dehydration and rehydration 9. Viral, bacterial and parasitic infections of the gut 10. Syndrome of raised bilirubin 11. Viral hepatitis 12 Intrahospital infections			
12.	**Course methodology:** –			
13.	**Total available time**		5 ECTS x 30 h = 150 hours	
14.	**Time allocation**		45+30+15+15+45 = 150 hours	
15.	**Instruction activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	45 hours
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar paper**	30 hours
16.	**Other activities**	**16.1.**	**Project assignments**	**15 hours**
		16.2.	**Individual**	**15 hours**

			assignments	
		16.3.	**Independent study**	**45 hours**
17.	**Methods of assessment**			
	17.1.	**Mid-term tests / oral exams**		**70 points**
	17.2.	**Seminars (paper / project - presentation: written and/or oral)**		**10 points**
	17.3.	**Attendance and participation**		**20 points**
18.	**Grading system (points / grades)**		**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.	**Signature and final exam prerequisites**			
20.	**Language of instruction**		English	
21.	**Course evaluation**		**Self-evaluation**	

22.	**Literature**

	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	**Fran Mihajlevic, Josip Falisevac**	**Infectious diseases**	**Springer Verlag**	**2006**
		2.				
		3.				
	22.2.	**Supplementary literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				
		2.				
		3.				

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Ecology of health and hygiene**			
2.	**Code**	3MF120912			
3.	**Study Program**	Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University “Goce Delcev” - Stip Faculty of medical science Department of fundamental medical science			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	seventh semester	**7.**	**Number of credits**	2
8.	**Professor (s)**	Assistant professor Nevenka Velickova PhD			
9.	**Requirements for enrollment the Course**	Enrolled second year of studies			
10.	**Purposes ofthe curriculum (competencies):** The purpose of this subject is for the students to gain basic knowledge from the area of medical ecology, the protection of the environment and hygiene.				
11.	**Content ofthecourse program:** • Introduction to ecology • Public health aspect of environment risks				

<table>
<tr><td></td><td colspan="5">Air pollution and public health aspect of air pollution
Water hygiene andpublic health aspect ofwater supply and sanitation
Public health aspect of surface water and swimming and recreation water
Public health aspect of waist; public health aspect of soil
Public health aspect of school hygiene
Public health aspect of ionizing and nonionizing radiation
Health-ecological aspects of noise
Hygiene in public and communal facilities
Education facilities hygiene
Health facilities hygiene</td></tr>
<tr><td>12.</td><td colspan="5">Learning methods:

Lectures,exercises,seminars research and practical activities</td></tr>
<tr><td>13.</td><td colspan="2">Total available time</td><td colspan="3">2 ECTS x 30 h = 60 hours</td></tr>
<tr><td>14.</td><td colspan="2">Distribution of available time</td><td colspan="3">30+0+15+5+10 = 60 hours</td></tr>
<tr><td rowspan="2">15.</td><td rowspan="2">Forms of teaching / learning activities</td><td>15.1.</td><td>lectures / theoretical - contact teaching,

e-teaching</td><td>30 hours</td></tr>
<tr><td>15.2.</td><td>theoretical and practical exercises,

e-exams, preparation of independent seminar work</td><td></td></tr>
<tr><td rowspan="3">16.</td><td rowspan="3">Other activities</td><td>16.1.</td><td>Project tasks</td><td>15 hours</td></tr>
<tr><td>16.2.</td><td>Individual tasks</td><td>5 hours</td></tr>
<tr><td>16.3.</td><td>Home learning</td><td>10 hours</td></tr>
<tr><td rowspan="2">17.</td><td colspan="4">Method of assessment</td></tr>
<tr><td>17.1.</td><td colspan="2">Tests / oral exams</td><td>70 points</td></tr>
</table>

	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**
18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	v	42 points acquired	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	Self-evaluation	

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	M. Kocubovski	Hygiene whit medical ecology		2011
		2.				
		3.				

Annex No.3	Program of the Course - first/second/third cyclestudies

1.	**Title of the Course**	**Radiology**			
2.	**Code**	3MF111412			
3.	**Study Program**	General medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce – Delchev Faculty of medical sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	Seventh	**7.**	**Number of credits**	4
8.	**Professor (s)**	Prof. d-r. Tane Markoski			
9.	**Requirements for enrollment the Course**	Attested 6 th semester and noted down 7 th semester			
10.	**Purposes ofthe curriculum (competencies):** **Acquirement of basic a knowledge of the Radiology and education of the students for interpretation of radiology finding in different pathology and diseases**				

<table>
<tr><td>11.</td><td colspan="4">Content ofthecourse program:

1. Introduction in the subject
2. General radiology
3. Production of a X ray
4. Using of the X ray characteristics in diagnostic procedures
5. Digital radiology
6. Imaging diagnostic methods / US, CT and MRI/
7. Radiology diagnosis of the cardiovascular system
8 Radiology diagnosis of the respiratory tract
9 Radiology diagnosis of the GIT tract.
10 Radiology diagnosis of the urinary tract.
11. Radiology diagnosis of the musculoskeltal system

11 Neuro radiology</td></tr>
<tr><td>12.</td><td colspan="4">Learning methods:

Lecture by oral and visual presentation, working in small group/ exercise/

Seminar works, prove of the knowledge by tests. Final exam

–</td></tr>
<tr><td>13.</td><td colspan="2">Total available time</td><td colspan="2">4 ECTS x 30 h = 120 hours</td></tr>
<tr><td>14.</td><td colspan="2">Distribution of available time</td><td colspan="2">30+15+15+15+45 = 120 hours</td></tr>
<tr><td rowspan="2">15.</td><td rowspan="2">Forms of teaching / learning activities</td><td>15.1.</td><td>lectures / theoretical - contact teaching,

e-teaching</td><td>30 hours</td></tr>
<tr><td>15.2.</td><td>theoretical and practical exercises,

e-exams, preparation of</td><td>15 hours</td></tr>
</table>

			independent seminar work	
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**15 hours**
		16.3.	**Home learning**	**45 hours**

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**

18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	**Active participation in the lectures an exams, seminar works, successfully passed test, scour of all activities minimum 42 points**	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**	

22.	**Literature**

	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	**Lecture prepare by the responsible professor**			
		2.				
		3.				
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	**Hariquabal Singh** **Diness Pardesi**	**Radiology for undergraduates and general practitioners**	**Yaipee**	**2011**
		2.				
		3.				

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Dermatovenerology**			
2.	**Code**	**3MF106312**			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences Department of Dermatovenerology			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	seventh semester	**7.**	**Number of credits**	4
8.	**Professor (s)**	Prof.Vesna Grivceva-Panova, MD, PhD			
9.	**Requirements for enrollment the Course**	Certified 6th and 7th enrolled semester			
10.	**Purposes ofthe curriculum (competencies):**To learn the theoretical foundations of skin and Venereal diseases and their diagnosis and treatment in clinical practice**.**				
11.	Content of the course program: - Theory (interactive lectures):				

	(1.) Basic principles of dermatological diagnosis (2.) Viral, bacterial and rickettsial diseases of the skin and mucosa (3.) Sexually transmitted diseases of skin and mucosa (4.) Protozoan and fungal diseases of the skin and mucosa (5.) Diseases caused by arthropods and worms with skin manifestations (6.), Urticaria, angioedema and anaphylaxis, skin manifestations in response to drugs (7.) Erythema-papules-squamous disease, Bullous dermatoses, Pustulous diseases (8.) Keratinization disorders, connective tissue disorders (9.) Pruritus, prurigo and neuro-psychiatric disorders (10.) Pigmentation disorders, benign and malignant tumors of the skin (11.) Disorders of hair and nails (12th) Venerologycal diseases of male and female sex organs - Practical training (exercises): (1.) Bacterial dermatoses; Mikobakteriosis, tropical dermatoses; Granulomatous dermatosis of unknown etiology. (2.) Sexually transmitted infections (3.) Viral, fungal and parasitic dermatozi (4.) Erithemosquamous dermatoses (5.) Allergic diseases and reactive skin, specially shaped erythema (6.) Bullous dermatoses (7.) Genodermatous, Photodermatous, pigmentation disorders, diseases pilosebaceal unit

	(8.) Benign skin tumors and naevi, precancerous and malignant skin tumors (9.) Diseases of hair and nails (10.) Phlebology (11.) Dismetabol dermatoses, Psyhodermatology			
12.	**Learning methods:** Theoretically interactive lectures, supervised practical exercises with patients, making individual mentoring project assignments (papers), research, and practice in outpatient polyclinic, clinical hospital setting.			
13.	**Total available time**		4 ECTS x 30 h = 120 hours	
14.	**Distribution of available time**		30+15+15+15+45 = 120 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	30 hours
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	15 hours
16.	**Other activities**	**16.1.**	**Project tasks**	15 hours
		16.2.	**Individual tasks**	15 hours
		16.3.	**Home learning**	45 hours
17.	**Method of assessment**			

	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**
18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	Scored at least 42 points on all grounds (lectures, tutorials, colloquia, project task	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	Methods specified in the relevant laws and regulations of the R of Macedonia and UGD Stip	

22.	**Literature**					
		Required literature				
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.1.	**1.**	**D. M. Thappa**	**Dermatology, Venereology and Leprology**	**Elsevier**	**2005**
		2.				

		Additional literature				
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.2.	**1.**				
		2.				
		3.				

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Oncology and radiotherapy**			
2.	**Code**	3MF110012			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medicine			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	seventh	**7.**	**Number of credits**	2
8.	**Professor (s)**	Prof. Liljana Maneva			
9.	**Requirements for enrollment the Course**	Enrolled fourth year			
10.	**Purposes ofthe curriculum (competencies):** to teach students and to describe a large number and variety of malignant neoplasms that may affect body. The difference between benign and malignant tumours, frequency, causes for cancer, detection and recognition of cancer, prevention, surgical principles, radiation therapy, and chemotherapy. Gastrointestinal cancer, Intratoracic, breast, gynaecologic, head and neck tumour, tumour of CNS,				

	Musculoskeletal tumours, skin cancer, lymphomas, leukemia, and paediatric malignancies.
11.	**Content of the course program:** **1.** Carcinogeneses and tumor growth, **2.** Frequency of tumors according to age and sex, **3.** Geographic distribution, **4.** Definition of cancer,causes of cancer,cellular transformation,the genetics of cancer,tumor progression,spread and behavior of cancer **5.** Staging,classification of cancer,staging of cancer,TNM System,detection and recognition of cancer,surgical principes 6. Principes of radiotherapy, 7. Systemic cancer treatment, tumor immunology,cancer management, 8. Gastrointestinal cancer, 9. Intrathoracic cancer, 10. Breast cancer, 11. Gynecologic cancer, 12. Cancer of the urooncology and male reproductive system, 13. Head and neck tumors, 14. Musculoskeletal tumors, 15. Skin cancer, 16. Metastatic cancer,Lymphomas,Myeloma, Leukemia.Pediatric malignancies.

12.	**Learning methods:** – Lecturing – Exercises – Seminar work – Written examination – Oral-examination			
13.	**Total available time**		2 ECTS x 30 h = 60 hours	
14.	**Distribution of available time**		30+0+15+5+10 = 60 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	**30 hours**
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	
16.	**Other forms of activity**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**5 hours**
		16.3.	**Home learning**	**10 hours**
17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**		**10 points**
	17.3.	**Activity and participation**		**20 points**
18.	**Assessment Criteria(points**		**up 50points**	**5(five) (F)**

	/score)	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.	Signature requirement and passing the final exam	Signature and passing the final exam, activity on lectures and exercises	
20.	Language of teaching / study	Macedonian	
21.	Method of monitoring the quality of teaching	Self-evaluation	

22.	Literature					
	22.1.	Required literature				
		No.	Author	Title	Publisher	Year
		1.	Horton and Hill	Clinical Oncology	Saunders co	2007
		2.				
		3.				
	22.2.	Additional literature				
		No.	Author	Title	Publisher	Year
		1.				

Annex No.3	

	Program of the Course - first cyclestudies				
1.	**Title of the Course**	**Sports Medicine**			
2.	**Code**	3MF110612			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical science			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	seventh semester	**7.**	**Number of credits**	**2**
8.	**Professor (s)**	Prof. dr. Zoran Handziski,			
9.	**Requirements for enrollment the Course**	Finished 6th and enrolled 7th semester			
10.	**Purposes ofthe curriculum (competencies):** Introducing the students with the impact of physical activity on the body, as well as prevention and treatment of diseases that occur as a result of exercise				
11.	**Content ofthecourse program:** **Theoretical study units:** •Basic principles of exercise physiology • Basic principles of conditioning in sports • Dosage and evaluation of the training process by monitoring heart rate				

	• Assessment and testing of sports performance • Nutrition in sport • Supplementation in sports • Prevention of sports injuries • Implementation of sports medicine in the regulation of body composition • Syndrome of overtraining • Implementation of isokinetic exercises in sports medicine • Doping in sport			
12.	**Learning methods: Interactive teaching of lectures and tutorials, practical exercises.**			
13.	**Total available time**		2 ECTS x 30 h = 60 hours	
14.	**Distribution of available time**		30+0+15+5+10 = 60 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	**30 hours**
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	**0 hours**
16.	**Other forms of activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**5 hours**
		16.3.	**Home learning**	**10 hours**
17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		**70 points**

	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**
18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	• The method of assessment is based on the cumulating points on: lectures, tutorials, colloquia and seminar work; • mid-term exams are independent from one another, i.e. passing one is not a prerequisite for taking other mid-term exam; • The final exam does not depend on mid-term exams as well, they are not a requirement for passing the final exam, but the total number of points scored, which should not be less than 42 points; • In case of insufficient number of points for passing the final exam, the professor can arrange additional mid-term exam or additional activity when there is a sufficient number of candidates.	
20.	**Language of teaching / study**	English	

21.	**Method of monitoring the quality of teaching**	**Self-evaluation**

22.	**Literature**				
		Required literature			
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.1.	1.	Brukner P., Khan K	Clinical Sports Medicine	McGraw-Hill Companies,Icn Australia	2007
		2.	Frontera W., Herring S., Micheli L., Silver J.	Clinical sports medicine	Saunders Elsevier	2007
		3.	Kolt.S.G., Mackler L.S.	Physical Therapies in Sports and Exercise	Churrchill Livingstone Elsevier Philadelphia	2003
	22.2.	**Additional literature**			

Annex No.3	**Program of the Course - firstcyclestudies**	
1.	**Title of the Course**	**Clinical Immunology**

2.	**Code**	3MF107812			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	Seventh semester	**7.**	**Number of credits**	2
8.	**Professor (s)**	Doc. Dejan Trajkov, MD, PhD			
9.	**Requirements for enrollment the Course**	Passed exam of Immunology			
10.	**Purposes of the curriculum (competencies):** Introducing the students with immune disorders and diseases caused by them.				
11.	**Content of the course program:** 1. Infection and immunodeficiency 2. Anaphylaxis and Allergy 3. Autoimmunity and pregnancy 4. Lymphoproliferative diseases 5. Kidney diseases 6. Diseases of the joints and muscles 7. Eye diseases 8. Lung diseases 9. Gastrointestinal and liver diseases 10. Endocrinology and Diabetes				

	11. Hematological disease 12. Neuroimmunology Additional activities: Seminar work Two TBU (team-based learning) sessions on Transplantation and Skin Diseases			
12.	**Learning methods:** Interactive teaching, seminar work, TBU sessions.			
13.	**Total available time**		2 ECTS x 30 h = 60 hours	
14.	**Distribution of available time**		30+0+15+5+10 = 60 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	30 h
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	0 h
16.	**Other activities**	**16.1.**	**Project tasks**	15 hours
		16.2.	**Individual tasks**	5 hours
		16.3.	**Home learning**	10 hours
17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**		**10 points**
	17.3.	**Activity and participation**		**20 points**
18.	**Assessment Criteria**		**up 50points**	**5(five) (F)**

	(points /score)	**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.	**Signature requirement and passing the final exam**	• The method of assessment is based on the cumulation of points of: lectures, TBU, colloquia and seminar work; • TBU sessions are not mandatory; • Seminar work consists of practical work and written work; • The final exam is also not dependent on the midterm, they are not a requirement for passing the final exam, but the total number of points scored, which should not be less than 42 points, finished and delivered paper work is a prerequisite for taking the final exam. • In case of insufficient points for passing the final exam, the professor can arrange additional colloquium when there is sufficient number of candidates.	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the**	Supporting evaluation of students and self-	

	quality of teaching	evaluation.

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	H. Chapel et al	Basic concepts in Clinical Immunology	Tabernakul,	2010
		2.				
		3.				
	22.2.	**Additional literature**				

Course program for the firstcycle of study					
1.	Course title	**Counseling and Psychotherapy**			
2.	Code				
3.	Study programme	General medicine			
4.	Organizer of the study programme (unit/ institute, department)	Faculty of Medical Science			
5.	Level of study (first, second, third cycle)	Integrated studies first and second cycle			
6.	Academic year / semester	seventh semester	7.	Number of ECTS credits	2
8.	Professor	**Prof. Lence Mlloseva, Ph.D**			
9.	Preconditions for course enrollment	enrolled fourth year			
10.	Goals of the syllabus (competences): *Purpose of Course:* Overall, the purpose of this course is to gain a comprehensive understanding of the major theories of counselling and psychotherapy, and to undertake a critical examination of their key concepts, assumptions, therapeutic goals, and techniques. Factors common to many types of psychotherapy, despite differing theoretical orientations and techniques will also be considered (e.g., empathy, expectancy, therapeutic alliance). *Learning Objectives:* During this course students will: • develop a comprehensive understanding of a range of therapeutic approaches, their key concepts and assumptions, and therapeutic goals and techniques. • critically appraise the contributions and limitations of each of the therapeutic approaches. • gain an appreciation for the centrality of the “therapeutic relationship” and common factors that transcend specific theories of psychotherapy. • learn about specific techniques designed to work with maladaptive thoughts, feelings, or behaviours. • acquire an in depth understanding of a specific approach (or integration of approaches) to psychotherapy through hands-on interviews with practicing clinicians, and subsequent application and integration of the relevant literatures to the interview content and experience. • understand the ethical and legal context in which a psychologist practices, and the principles and guidelines that define the parameters of the therapeutic relationship • become more aware of how sociological and cross-cultural factors affect the therapeutic relationship and process, and how one may build toward a culturally competent practice.				

11.	Content of the syllabus: • Introduction – 'Essential Ingredients' of Counseling and Psychotherapy. • Fundamental questions of Psychological Counseling. -The counselor as a person and professional. - Ethicaland cross-cultural issues in counseling practice. - Counseling skills and knowledge. • Theories and techniques of counseling and psychotherapy -Psychoanalytic therapy. -Adlerian Therapy -Existential Therapy. - Person-centered therapies. - Gestalt therapy. - Reality therapy. - Behavior therapy. - Cognitive-behavior therapy. -Rational-emotive behavior therapy. - Feminist Therapy. - Family systems therapy. - Positive psychology-counseling and psychotherapy. • Integration and application. -Specificity of counseling and psychotherapy work with children, adolescents and families. -Integrative approach. • Seminaries based on Case Study and Comparative Analysis of Two TherapyApproaches or Brief Research Review of an Approach to Therapy.	
12.	Methods of study: seminars, interactive method: group work, reports, homework, seminar papers, discussion, debate, cooperative studying techniques, individual tasks, simulation of extra-curricular educational activities, individual studying	
13.	Total amount of available time:	2 ECTS x 30 h = 60 hours
14.	Distribution of available time:	30+0+15+5+10 = 60 hours

15.	Forms of teaching activities	15.1.	Lectures- theoretical classes	30 hours
		15.2.	Practice(laboratory, auditory) seminars, team work	
16.	Other forms of activities	16.1.	Project tasks	15 hours
		16.2.	Individual tasks	5 hours
		16.3.	Homework	10 hours

17.	Forms of assessment		
	17.1.	Tests	40
	17.2.	Seminar paper/project (presentation: oral and written)	10
	17.3.	Activity and participation	20
	17.4.	Oral exam	30

18.	Criteria for assessment (points /grade)	to 50 points	5 (F)
		from 51 to 60 points	6 (E)
		from 61 to 70points	7 (D)
		from 71to 80 points	8 (C)
		from 81to 90 points	9 (B)
		from 91 to 100 points	10 (A)
19.	Condition for getting a signature and taking the final exam	60% success from all pre-exam activities or 42 points from the mid-term tests and the seminar paper as well as attendance and participation in class	
20.	Language in which the classes are conducted	Macedonian language	
21.	Method of monitoring the quality of instruction	Self-evaluation	

22.	Literature:					
	22.1.	Compulsory literature				
		Ordinal number	Author	Title	Publisher	Year
		1.				
		2.	Corey, G.	*Theory and practice of counselling and psychotherapy (9th Ed.).*	Pacific Grove, CA: Brooks/Cole	2012

		3.	Corey, G.	*Case Approach to Counseling and Psychotherapy*	Belmont: Thomson Brooks Cole	2009
	22.2.	Additional literature				
		Ordinal number	Author	Title	Publisher	Year
		1.	Gabbard,G.O.	*Textbook of Psychotherapeutic Treatmans*	London, Washington: American Psychiatric Publishing, Inc.	2009
		2.	Nelson-Jones,R.	*Praktične vještine u psihološkom savjetovanju i pomaganju*	Jastrebarsko: Naklada Slap	2007
		3.				

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Oncogene viruses**			
2.	**Code**				
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences Department of Microbiology			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	seventh	**7.**	**Number of credits**	2
8.	**Professor (s)**	Ass. Prof. Vaso Taleski, MD, D-r Sc.			
9.	**Requirements for enrollment the Course**	Passed exam on Microbiology and parasitoogy 2			
10.	**Purposes ofthe curriculum (competencies):** Basic aim of the course programis to introduce students with current knowledge on role of viruses and viral infections in connection with human tumors				
11.	**Content ofthecourse program:** • Morphology, structure and replication of viruses • Classification of viruses • Importance of viral infections. Persistence of viruses • Viruses and human tumors • Oncogenesis and transformation				

	• *Human papilloma virus (HPV)* • Herpes viruses and tumors: *Epstein Barr virus (EBV), Human herpes virus 8 (HHV 8)* • *Hepatitis B virus (HBV)* • *Human T lymphotrophic viruses (HTLV 1 , HTLV 2)* • *Hepatitis C virus (HCV)* • Other viruses as potential agents for tumors • Oncolytic viruses			
12.	**Learning methods:** Methods of oral and visual learning/presentations			
13.	**Total available time**	2 ECTS x 30 h = 60 hours		
14.	**Distribution of available time**	30+0+15+5+10 = 60 hours		
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	30 hours
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	0 hours
16.	**Other activities**	**16.1.**	**Project tasks**	15 hours
		16.2.	**Individual tasks**	5 hours
		16.3.	**Home learning**	10 hours
17.	**Method of assessment**			
	17.1.	**Tests**		40 points
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**		10 points
	17.3.	**Activity and participation during lecturing**		10 points
	17.4	**Activity and participation during lab practical work**		10 points
	17.5	**Final exam**		30 points

18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	Requirements for signature: presence at lecturing and practical work. Requirementsfor final exam: Passed exam on Microbiology and parasitology 2, at least 42 points from two colloquia, presence at lecturing, seminars (paper/project - presentation. Colloquia are not conditionally connected. For students with points over 37 and less than 42, professor could organize additional colloquium with maximum of 10 additional points	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	Student evaluation Self-evaluation	

22.	**Literature**					
		Required literature				
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.1.	**1.**	Greenwood D. et all.	Medical microbiology	Project of the Government of the Republic of Macedonia, for translation of vocational and scientific books	17-edition, 2006, Translated in 2011

		2.	Nada Kuljic-Kapulica	Viruses and tumors	Military medi-calpublica-tion institute, Belgrade, Serbia	2006
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.		-		

Annex No.3	Program of the Course - first cycle studies				
1.	Title of the Course	**Internal Medicine 2**			
2.	Code	3MF106812			
3.	Study Program	General medicine			
4.	Organizer of the study program (unit or institute, Faculty, department)	University Goce Delcev, Stip Faculty of Medical Sciences			
5.	Cycle (first, second and third cycle)	Integrated studies first and second cycle			
6.	Academic year / semester	Eight	7.	Number of credits	9
8.	Professor (s)	Stefan Talevski Assistant professor			
9.	Requirements for enrolment the Course	Condition to be able to enrol to the current course of internal medicine 2, is certificate of attendance to the course on internal medicine 1. To take the exam of internal medicine 2, will be possible only for students who passed internal medicine 1 exam.			
10.	Purposes ofthe curriculum (competencies): • Mastering the art of rational diagnosis and therapeutic treatment based on etiopathogenetic fundamentals and basics of clinical pharmacology • Mastering the art of rational clinical evaluation and treatment of diseases of the endocrine system, hematological, gastrointestinal diseases and toxicological diseases and conditions • Mastering the art of rational use of Paraclinical investigations that leads to the diagnosis of diseases • Mastering the art of rational treatment based on the principles of evidence based medicine and guided by recommendations for the treatment of diseases				

11.	Content ofthecourse program: • Gastrointestinal diseases (4 units) • Haematologic diseases (4 units) • Endocrinology (4 units) • Toxicology (3 units)			
12.	Learning methods: interactive lectures, practical classes, project work			
13.	Total available time		9 ECTS x 30 h = 270 hours	
14.	Distribution of available time		75+60+15+15+105 = 270 hours	
15.	Forms of teaching / learning activities / per week	15.1.	Lectures / theoretical - interactive teaching	75 hours
		15.2.	Practical exercises, e-learning, preparationofindependentseminar work	60 hours
16.	Other forms of activities	16.1.	Project tasks	15 hours
		16.2.	Individual tasks	15 hours
		16.3.	Home learning	105 hours

17.	Method of assessment		
	17.1.	Attendance to the lectures and active participation	maximum 10 points
	17.2.	Attendance to the practical lessons and active participation	maximum 10 points
	17.3	Continuous knowledge checking	maximum 2x20 points
	17.4.	Seminars (paper/project - presentation: written and/or oral) optional	maximum 10 points
	17.5.	Practical exam	maximum 10 points
	17.6	Final Exam	maximum 30 points

18.	Assessment Criteria(points /score)	up 50points	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.	Signature requirement and passing the final exam	Minimum of 42 points gained through the attendance and active participation on the theoretical, practical work, individual activities and tests.	
20.	Language of teaching / study	English	
21.	Method of monitoring the quality of teaching	Self-evaluation	

22.	Literature					
	22.1.	Required literature				
		No.	Author	Title	Publisher	Year
		1.	Vladimir Serafomovski and all	Internal Medicine	Macedonian Treasure, Kumanovo	2003
		2.	Faucu D.L, Kasper D.L. Londo D.L. Braunwald E, Hauser S.L. Jameson J.L. Lascalro J.	Harrison's principles of internal Medicine (Atlas), 17th edition	"Tabenakul" Skopje	2013
	22.2.					

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Infective diseases 2**			
2.	**Code**	3MF107112			
3.	**Study Program**	General medicine			
4.	**Organizer of the study program (unit orinstitute, Faculty, department)**	University Goce Delcev Faculty of Medical sciences Department of General medicine			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	Eighth	**7.**	**Number of credits**	6
8.	**Professor (s)**	Velo Markovski,Phd			
9.	**Requirements for enrollment the Course**	Enrolled fourth year			
10.	**Purposes ofthe curriculum (competencies):** To master the basic elements of diagnosis, therapy and prophylaxis of infectious diseases				
11.	**Content of the course program:** • Viral diseases (with rush): varicella-zoster, measles, rubella, smallpox • Flu • Characteristics of angina and diphtheria and other upper respiratory infections				

<table>
<tr><td></td><td colspan="4">Parotitisepidemic.
Mononucleosis
Herpes virus infections
Rabies, Leptospirosis
Zoonosis
Parasitic diseases
Infective diseases of the CNS
HIV
Lumbal puction</td></tr>
<tr><td>12.</td><td colspan="4">Learning methods: theoretical and practical lectures</td></tr>
<tr><td>13.</td><td colspan="2">Total available time</td><td colspan="2">6 ECTS x 30 h = 180 hours</td></tr>
<tr><td>14.</td><td colspan="2">Distribution of available time</td><td colspan="2">45+30+15+30+60 = 180 hours</td></tr>
<tr><td rowspan="2">15.</td><td rowspan="2">Forms of teaching / learning activities</td><td>15.1.</td><td>lectures / theoretical - contact teaching,
e-teaching</td><td>45 hours</td></tr>
<tr><td>15.2.</td><td>theoretical and practical exercises,
e-exams, preparation of independent seminar work</td><td>30 hours</td></tr>
<tr><td rowspan="3">16.</td><td rowspan="3">Other activities</td><td>16.1.</td><td>Project tasks</td><td>15 hours</td></tr>
<tr><td>16.2.</td><td>Individual tasks</td><td>30 hours</td></tr>
<tr><td>16.3.</td><td>Home learning</td><td>60 hours</td></tr>
<tr><td>17.</td><td colspan="4">Method of assessment</td></tr>
</table>

	17.1.	Tests / oral exams	70 points
	17.2.	Seminars (paper/project - presentation: written and/or oral)	10 points
	17.3.	Activity and participation	20 points
18.	Assessment Criteria (points /score)	up 50points	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.	Signature requirement and passing the final exam	none	
20.	Language ofteaching / study	English	
21.	Method of monitoring the quality of teaching	Self-evaluation	

22.	Literature					
	22.1.	Required literature				
		No.	Author	Title	Publisher	Year
		1.				
		2.	D. Mandell et al.	Infectious diseases	Springer	2004
		3.				
	22.2.	Additional literature				
		No.	Author	Title	Publisher	Year

		1.				

Annex No.3	Program of the Course - first/second/third cyclestudies

1.	**Title of the Course**	**Neurology**			
2.	**Code**	3MF108512			
3.	**Study Program**	General medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medicine			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	eight semester	**7.**	**Number of credits**	5
8.	**Professor (s)**	Prof.Dr.liljana Ilievska			
9.	**Requirements for enrollment the Course**	enrolled fourth year			
10.	**Purposes ofthe curriculum (competencies):** to get acquainted with the neurological diseases, etiopathogenesis, clinical picture, diagnosis and treatment				
11.	**Content of the course program:** neurological diseases				

12.	**Learning methods:** 1.Neurological history and status 2. Cranial nerves. Reflex. Sensibility.Motility. 3. Piramidal and extrapiramidal syndrom. 4. Diseasesand disorderswithprimarylocalizationofnerves. 5. Diseasesand disorders of themuscularsystem 6.Diseasesand disorders of thespine 7. Diseasesand disordersofthe forebrain 8.Diseasesand disorders of thesmall brainandbrainstem 9. Cerebrovasculardiseases 10. Neuroimmunology. Diseases of theneuromuscularsynapse. 11. Neurodegenerativediseases. Neuroinfections 12.Diagnosticmethods usedinneurology			
13.	**Total available time**		5 ECTS x 30 h = 150 hours	
14.	**Distribution of available time**		30+30+15+15+60 = 150 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	30 hours
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	30 hours
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**15 hours**

		16.3.	**Home learning**	**60 hours**
17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**		**10 points**
	17.3.	**Activity and participation**		**20 points**
18.	**Assessment Criteria (points /score)**		**up 50points**	**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.	**Signature requirement and passing the final exam**		**Regularity and activity of lectures and tutorials, satisfactory colloquia**	
20.	**Language of teaching / study**		English	
21.	**Method of monitoring the quality of teaching**		**Self-evaluation**	

22.	**Literature**					
		Required literature				
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.1.	**1.**	**L. P. Rowland, T. A. Pedley,**	**Neurology**	**Willey**	**2010**
		2.				
		3.				

	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				
		2.	**Rodzer P.Simon, Dejvid A Grinberg**	**Clinical neurology**	**Springer**	**2012**
		3.				

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Psychiatry**			
2.	**Code**	3MF111312			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	eight semester	**7.**	**Number of credits**	4
8.	**Professor (s)**	Doc d-r Kniginja Richter, MD, PhD			
9.	**Requirements for enrollment the Course**	enrolled fourth year			
10.	**Purposes of the curriculum (competencies):**familiarize students with the basic elements of diagnosis, therapy and prophylaxis of psychiatric diseases				
11.	**Content of the course program:** 1. neurodegenerative diseases 2. Disease of addiction				

	3. Psychotic disorders 4. Affective disorders 5. Diseases of nutrition and sleep. Psychosomatic diseases 6.Posttraumatic diseases. Personality disorder 7. Transcultural psychiatry 8. Stigma. Mental health reforms 9. Community mental health 10. Deep analytic psychotherapy 11. Behaviour psychotherapy 12.Techics of supportive psychotherapy			
12.	**Learning methods:** Theoretical Lectures, Practical Exercises, Term papers, Individual Presentation;			
13.	**Total available time**		4 ECTS x 30 h = 120 hours	
14.	**Distribution of available time**		30+15+15+15+45 = 120 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	30 hours

		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	15 hours
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**14 hours**
		16.3.	**Home learning**	**45 hours**

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**

18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	Listened and succesfully passed subjects Anatomy 3 and Histology with embryology 2	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**	

22.	**Literature**

	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	**K. Richter et al**	**Psychiatry**	**Springer**	**2013**
		2.				
		3.				
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	**Cadlikovski**	**Psychiatry**	**Prosvetno delo Skopje**	**2004**
		2.	**K. Richter, V. Ortakov, D. Beleska**	**Mental Health in community**		**2006**
		3.				

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Physical Medicine and Rehabilitation**			
2.	**Code**	3MF126612			
3.	**Study Program**	General medicine 2009/2010			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University “Goce Delcev” - Stip Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	Eighth semester	**7.**	**Number of credits**	2
8.	**Professor (s)**	Professor Dr. Zoran Handziski			
9.	**Requirements for enrollment the Course**	Verified seventh and enrolled eight semester			
10.	**Purposes ofthe curriculum (competencies):** **Theoretical and practical instruction.** During the classes students are introduced to the basic mechanisms and principles of physical medicine and rehabilitation, physiological effect, the basic methods of implementation and applying electrotherapy, heat, hydro and balneotherapy,as well as the basic principles for implementationphysical exercise and kinesitherapy for the treatment and prevention of various diseases of the individual systems. Acquiring the knowledge and competencies of combining physical factors, the rules for making physiotherapeutic plans and				

	programs, depending on the diagnosis and the patient's overall functional status.
11.	**Content of the course program:** **Theoretical teaching units:** 11.1. Introduction to physical medicine and rehabilitation, historic development. 11.2. Electrical, hydro, light and thermotherapy 11.3. Kinesitherapy- medical gymnastics 11.4. Orthoses and prostheses 11.5. Cerebral Palsy 11.6. Congenital dysplasia of the hip 11.7. Congenital crooked leg. Deformities of the spine. back pain 11.10. Rehabilitation of patients with amputated limbs 11.11. Physical treatment of contractures 11.12. Outlaw, paraplegia and quadriplegia 11.13. Prevention and risk factors for osteoporosis 11.14. Rehabilitation of patients with cardiovascular, pulmonary and rheumatological diseases 11.15. Rehabilitation in degenerative diseases **Practical teaching units:** 11.1. Basic mechanisms and principles of physical medicine and therapy optimization and combining physical factors 11.2. Thermotherapy, hydrotherapy and balneology. Physiological and therapeutic effect on individual systems, classification, methods of application,

	dosage 11.3. Electrotherapy. Types of currents, physiological and therapeutic action, indications and contraindications, methods of application, dosage. Presentation and work with the available equipment, proper positioning of the patient when working with tools. 11.4.Magnetic therapy, laser therapy and ultrasound therapy. Species, physiological and therapeutic action, indications and contraindications, methods of application, dosage. Presentation and work with available physiotherapeutic apparatus and proper positioning of the patient when working with appliances. 11.5. Kinesitherapy. Basic principles of motor activity, types, purposes and means of kinesitherapy.Place of the kinesitherapy in physical medicine and rehabilitation. Indications and contraindications for its implementation 11.6. Reflexotherapy, acupuncture, acupressure 11.7. Types rehabilitation and assessment of rehabilitation potential. 11.8. Physical therapy and rehabilitation of patients with cardio-respiratory and cardiovascular diseases 11.10 / 11.9. Physical therapy and rehabilitation of patients with the most common traumatic orthopedic and rheumatic diseases 11.11 / 11.12. Physical therapy and rehabilitation of patients with the most common diseases of the CNS and PNS			
12.	**Learning methods:** Interactive teaching lectures and tutorials, practical exercises			
13.	**Total available time**		2 ECTS x 30 h = 60 hours	
14.	**Distribution of available time**		15+15+15+5+10 = 60 hours	
15.	**Forms of teaching /**	**15.1.**	**lectures / theoretical - contact teaching,**	**15 hours**

	learning activities		**e-teaching**	
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	**15 hours**
16.	**Other activity forms**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**5 hours**
		16.3.	**Home learning**	**10 hours**

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**

18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	The method of assessment is based on the cumulation of points scored: lectures, tutorials, colloquiums and seminar work; • The colloquiums are independent of each other, taking one is not a precondition for taking other colloquium; • The final exam is also not dependent of colloquiums, they are not a requirement for passing the final exam, but the total number of	

		points scored, which should not be less than 42 points; • In case of insufficient number of points for passing the final exam, the professor can arrange additional colloquiums or additional activity if it has a sufficient number of candidates.
20.	**Language of teaching / study**	English
21.	**Method of monitoring the quality of teaching**	Supporting the evaluation of students and self-evaluation

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Risteski S.	Fundamentals of Physical Medicine	Bitola	1995
		2.	Ryazkova, M., Kirov, I.	Guide for physical therapy	Sofia	1998
		3.				
	22.2.	**Additional literature**				
		No.	Author	Title	Publisher	Year
		1.	Karaneshev G., and co-authors	Physical therapy - general and special part	ARSO, Sofia	2002
		2.				
		3.	Fichorska D.	The days after stroke. Rehabilitation	August 2nd, Stip	2006

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Nuclear medicine**			
2.	**Code**	**3MF109412**			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	eight semester	**7.**	**Number of credits**	2
8.	**Professor (s)**	Doc. D-r Zdenka stojanovska Prof.Emilija Janevik-Ivanovska, MD, PhD			
9.	**Requirements for enrollment the Course**	There are no requirements for enrollment the course			
10.	**Purposes ofthe curriculum (competencies):**Introduction to the fundamentals of the application of open sources of radiation in medicine and their application in the diagnosis, treatment and medical research.				
11.	1. Structure and materia.Radioaktivity. Law of Radioactive decay				

	2. Interaction of ionizing radiation with matter. 3. Detection of ionizing radiation. gamma camera 4. Dosimetry 5. Biological effects of ionizing radiation. 6. Radiofarmaceutic drugs - definition, formulation, role, regulation. Labeling of cells 7. Application of nuclear medical examinations in cardiology 8. Application of nuclear medical examinations in nephrology 9. Application of nuclear medical examinations - diseases of gastrointestinal system and hepatobilar system 10. Application of nuclear medical examinations in diseases of pulmonary system 11. Application of nuclear medical trials in oncology and diseases of the bone system 12. Positron emission tomography - PET. Fundamentals of radionuclide therapy	
12.	**Learning methods:** small group work, homework, practical work, project assignments, discussion.	
13.	**Total available time**	2 ECTS x 30 h = 60 hours

14.	**Distribution of available time**		30+0+15+5+10 = 60 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	30 h
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	0h
16.	**Other activities**	**16.1.**	**Project tasks**	15 hours
		16.2.	**Individual tasks**	5 hours
		16.3.	**Home learning**	10 hours

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**

18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	Scored at least 42 points on all grounds (lectures, tutorials, colloquia, project task	
20.	**Language of teaching / study**	English	

21.	**Method of monitoring the quality of teaching**	Self evaluation

22.	**Literature**					
		Required literature				
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.1.	**1.**	**SharpP.F, Gemmell H.Г., . Murray A.D.**	**Practical Nuclear Medicine**	**Springer-Berlag, London**	**2005**
		2.	**IAEA**	**Nuclear Medicine Resources Manua**	**IAEA**	**2006**

Article Number 3	**Study program from the first cycle of studies**				
1.	Name of the subject	**Intrahospital infections**			
2.	Code	3MF121112			
3.	Study program	General Medicine			
4.	Organiser of the study program (unit i.e. institute, department)	University Goce Delcev Faculty of Medical Sciences Department of Public Health and Health Protection			
5.	Level (first, second, third cycle of studies)	Integrated studies first and second cycle			
6.	Academic year / Semester	Eight semester	7.	Number of Credits	2
8.	Professor	Professor D-r Milka Zdravkovska			
9.	Preconditions for enrolling in the subject	Enrolled fourth year			
10.	Aims of the study program (competencies): The student to pay attention of the seriousness of the intrahospital infections as a huge public health problem and to understand the importance of the control of the intrahospital infections; To know how to define and recognize the intrehospital infections and the risk factors which influence or are dominant for their appearing; To acquire knowledge and skills for control, suppression and prevention of the intrahospital infections;				
11.	The content of the study program: <u>Theoretical study units:</u> • Definition and meaning of the intrahospital infections • Need for epidemiological approach in the control of the intrahospital infections • Etiology of the intrahospital infections • Occurrence and transmission of the intrahospital infections • Types of intrahospital infections • Disinfection and sterilization • Medical waste and intrahospital infections • Prevention of intrahospital infections • Types of epidemiological supervision and control of intrahospital				

<table>
<tr><td></td><td colspan="4">infections
• Organizational placement and law regulative in the control of intrahospital infections
• The importance of team work and interdisciplinary approach in control of intrahospital infections
• Elements of the control of intrahospital infections

Skills for the control of intrahospital infections:

• Appropriate hands hygiene; Control of the hands hygiene of the health care workers;
• Appropriate disinfection of the working surfaces and objects in the hospital environment;
• Appropriate taking a swab from nose, throat and wound;
• Appropriate processing / taking material for microbiological diagnoses from patients with intrahospital infections;
• Being critical in defining and taking the materials for microbiological diagnoses;
• Appropriate packing and transporting of the samples for microbiological diagnoses;
• Procedures in case of occurrence / isolation of MRSA;
• Appropriate taking of material for air control in the hospital environment (operation rooms, intensive care units);
• Group discussion – procedures and suggested measures for suppression and prevention of the intrahospital infections in certain situations (according to certain examples of intrahospital infections);
• Working in small groups/teams - procedures and suggested measures for suppression and prevention of the intrahospital infections in certain situations (according to certain examples of intrahospital infections);
• Filling a unified application for each patient with intrahospital infection;
• Defining incidence and prevalence rate of intrahospital infections</td></tr>
<tr><td>12.</td><td colspan="4">Teaching methods: Lectures, group discussionsmethods, individual assignments, seminar papers;</td></tr>
<tr><td>13.</td><td colspan="2">Total time available</td><td colspan="2">2 ECTS x 30 h = 60 hours</td></tr>
<tr><td>14.</td><td colspan="2">Allocation of the available time</td><td colspan="2">30+0+15+5+10 = 60 hours</td></tr>
<tr><td rowspan="2">15.</td><td rowspan="2">Forms of teaching activities</td><td>15.1.</td><td>Lectures- theoretical education</td><td>30 hours</td></tr>
<tr><td>15.2.</td><td>Exercises (laboratory auditory), seminar papers, teamwork</td><td>/</td></tr>
</table>

16.	Other forms of activities	16.1.	Project assignments	15 hours
		16.2.	Individual assignments	5 hours
		16.3.	Studying at home	10 hours
17.	Method of evaluation			
	17.1.	Tests and a final oral exam		70 points
	17.2.	Seminar paper/project (presentation: Written and oral)		10 points
	17.3.	Activity and participation		20 points
18.	Criteria for evaluating (points / grade)		to50points	5 (five) (F)
			from51 to60points	6 (six) (E)
			from61 to70points	7 (seven) (D)
			from71 to80points	8 (eight) (C)
			from81 to90points	9 (nine) (B)
			from91 to100points	10 (ten) (A)
19.	Signature requirement and taking the final exam	For a signature - presence of at least 7 (60%) lectures; For the final exam - scored at least 42 points on all grounds;		
20.	Language of teaching	English		
21.	Method of monitoring the quality of teaching	Self evaluation		

22.	Literature					
	22.1.	Compulsory literature				
		Ordinal number	Author	Title	Publisher	Year
		1.				
		2.				
		3.	C. Glen Mayhall	Hospital Epidemiology and	Philadelphi	2004

				Infection Control, Third Edition,	a, USA	
	22.2.	Additional literature				
		Ред. број	Author	Title	Publisher	Year

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Control of infectious and non-infectious diseases**			
2.	**Code**	3MF121412			
3.	**Study Program**	General medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences Department of Public health and Health Care			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	eight semester	**7.**	**Number of credits**	2
8.	**Professor (s)**	Professor Gorgi Sumanov			
9.	**Requirements for enrollment the Course**	Enrolled third year			
10.	**Purposes of the curriculum(competencies):** This course enables students to gain knowledge in the control of infectious and non-infectious diseases and health protection				
11.	**Content of the course program:**				

	Theoretical classes 1. Prevalence of infectious and non-infectious diseases at local and global level 2. Modern methods to disease elimination and eradication 3. Perspective in the control of infectious and non-infectious 4. Occurrence of infection and transmission of communicable diseases – new discoveries 5. Prevention measures and health devastation 6. Prevention of intrahospital infections 7. Prevention and medical care in military and other conditions 8. Epidemiological characteristics of intestinal infections 9. Epidemiological characteristics of respiratory infections 10. Epidemiological characteristics of diseases transmitted by vectors 11. Epidemiological characteristics of zoonosis infections 12. Epidemiological characteristics of non-communicable diseases and health devastation			
12.	**Learning methods:** Lectures, individual tasks, collaborative lectures, group discussions			
13.	**Total available time**		2 ECTS x 30 h = 60 hours	
14.	**Distribution of available time**		30+0+15+5+10 = 60 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	**30 hours**
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**5 hours**
		16.3.	**Home learning**	**10 hours**
17.	**Method of assessment**			

	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**
18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	**Minimum 42 points on all grounds (lectures, colloquia etc)**	
20.	**Language of teaching / study**	**English**	
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**	

22.	**Literature**					
		Required literature				
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.1.	**1.**	Jame F. Jakel and David L. Kac	Epidemiology, biostatistics and preventive medicine	Springer,	2010
		2.				
		3.				
	22.2.	**Additional literature**				

Annex No.3	**Program of the Course - first cycle studies**				
1.	**Title of the Course**	**Pediatrics 1**			
2.	**Code**	3MF110812			
3.	**Study Program**	General medicine			
4.	**Organizer of the study program(unit orinstitute, Faculty, department)**	University Goce Delcev Faculty of medical sciences Department of internal diseases			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	ninth semester	**7.**	**Number of credits**	5
8.	**Professor (s)**	Prof d-r Elizabeta Zisovska			
9.	**Requirements for enrollment the Course**	Confirmed eight and assigned ninth semester			
10.	**Purposes ofthe curriculum(competencies):** Introduction to the generalc Pediatrics as a clinical discipline, approach to the child as a patient,etiology and patophysiology of the diseases in childhood				
11.	**Content ofthecourse program:** • Introduction to the Pediatrics, deontology, ethics and approach to the child as a patient • Preventive pediatrics and epidemiology of the pediatric diseases • The importance and mode of taking history of the disease, examination,				

<table>
<tr><td></td><td colspan="4">diagnostics
• Developmental phases of the childhood, specificity
• Transition to the extrauterine life, neonatal resuscitation, newborn child
• Admission to the nursery, the first examination, birth injuries
• Genetics in children’s diseases, congenital anomalies
• Nutrition in childhood
• Immunity of the child, immunization, and immunological diseases
• Alergy in childhood
• Homeostatic disturbances in childhood
• Specificity of pharmacotherapy in childhood

Practical educational units: discussion and work out (completition):

• Taking the history of the pediatric disease, specificities and geneology
• Admission examination
• Integrative approach: history and examiantion of the sick child
• Addmission and examination: approach to the patient and the family (communication)
• Primary resuscitation-steps and order of the steps
• Breastfeeding, advantages of the breasmilk, indication for supplementation
• Introduction to the principles of the Baby friendly hospitals
• Calculation of the nutritional needs of the children of different ages
• Calendar of immunization, indications and contraindications
• Rickets-etiology, clinical signs, prevention and treatment
• Diagnostic methods in pediatrics
• Management of the pediatric therapy, dose and formulation</td></tr>
<tr><td>12.</td><td colspan="4">Learning methods:

-lectures, problem based learning, computer learning, detailed work out of a particular topic and writing a paper on an assigned topic, consultation, taking the history and physical examination of thechild, understanding the results, interpreting X-ray pictures, CT scans,</td></tr>
<tr><td>13.</td><td>Total availabletime</td><td colspan="3">5 ECTS x 30 h = 150 hours</td></tr>
<tr><td>14.</td><td>Distribution of availabletime</td><td colspan="3">30+30+15+15+60 = 150 hours</td></tr>
<tr><td>15.</td><td>Forms of teaching / learning activities</td><td>15.1.</td><td>lectures / theoretical - contact teaching,</td><td>30 hours</td></tr>
</table>

			e-teaching	
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	30 hours
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**15 hours**
		16.3.	**Home learning**	**60 hours**

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**40 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**
	17.4	**Practical and final exam**	**30 points**

18.	**Assessment Criteria(points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	• Cumulative sum of the points based on presence, activity, practical units, coloquia, and project-activity paper • The coloquia are independent one from another • The final exam is not dependant on the coloquia, but the pre-requisition for the final exam is the total number of cumulative points 42 and more • In a case of insuficient number of points for the final exam, there is an option for additional kind of activity (coloquium, project activity, etc) if there are required number of students
20.	**Language of teaching / study**	English
21.	**Method ofmonitoring the quality of teaching**	Students' evaluation and Self-evaluation

Annex No.3		**Program of the Course - first cycle studies**				
1.		**Title of the Course**	**Surgery 1**			
2.		**Code**	3MF117412			
3.		**Study Program**	General Medicine			
4.		**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.		**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.		**Academic year / semester**	ninth semester	**7.**	**Number of credits**	6
8.		**Professor (s)**	Prof. d-r Andreja Arsovski			
9.		**Requirements for enrollment the Course**	enrolled fifth year			
10.		**Purposes ofthe curriculum (competencies):** Acquiring knowledge about surgical principles				
11.		**Content of the course program:** 1. Introduction and history of surgery				

		2. Asepsis and antisepsis 3. Infections in surgery 4. Injuries – general 5. Injuries – mechanical 6. Injuries – termal 7. Shock and reanimation 8. Anesthesia 9. Hemorrhage and hemostasis 10. Transfusions 11. Modern diagnostic in surgery			
12.		**Learning methods:** Theoretical Lectures, Practical Exercises, Term papers, Individual Presentation;			
13.		**Total available time**		6 ECTS x 30 h = 180 hours	
14.		**Distribution of available time**		45+30+15+30+60 = 180 hours	
15.		**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	45 hours

			15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	30 hours
16.		**Other activities**	**16.1.**	**Project tasks**	**15 hours**
			16.2.	**Individual tasks**	**30 hours**
			16.3.	**Home learning**	**60 hours**

17.		**Method of assessment**		
	17.1.		**Tests / oral exams**	**70 points**
	17.2.		**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.		**Activity and participation**	**20 points**

18.		**Assessment Criteria (points /score)**	**up 50points**	**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.		**Signature requirement and passing the final exam**	60% from all pre-exam activities, min 42 points from 2 colloquiums, term paper, lectures and exersice	
20.		**Language of teaching / study**	English	

21.		**Method of monitoring the quality of teaching**	Self-evaluation

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	J. Panovski	General Surgery	Skopje	1983
		2.	J. Panovski	Specialised Surgery	Skopje	1988
		3.				
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**

Annex No.3	Program of the Course-first cycle studies

1.	**Title of the Course**	**Gynecology and Obstetrics 1**			
2.	**Code**	3MF115912			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, faculty, department)**	University “Goce Delcev” – Stip, Macedonia Faculty of Medical Sciences - Stip Department of Obstetrics and Gynecology			
5.	**Cycle (first, second and third cycle)**	first and second cycle of integrated academic studies			
6.	**Academic year / semester**	nineth semester	**7.**	**Number of credits**	5
8.	**Professor (s)**	Gligor Dimitrov, MD, PhD,			
9.	**Requirements for enrollment in the Course**	Enrolled fifth year			
10.	**Purposes ofthe curriculum (competencies):** Acquiring knowledge, skills and competencies for prevention, diagnosis and treatment of gynecologic diseases in women, through theoretical interactive lectures and hands-on practical training under supervision. **Predicted outcome of the course:**Medical student-future MD will be fully trained to work in the primary level of healthcare (medical office for general family practice), to prevent, diagnose, treat and follow-up certain number of				

	gynecologic diseases and conditions in women, to provide competent first aid in emergency situations in gynecology as well as to be able to recognize the need for referral to a specialist obstetrician/gynecologist in a higher level of healthcare (for consultation or hospitalization).
11.	**Content of the course program:** **Theoretical lectures:** 1. introduction to gynecology, clinical anatomy and embryology of the genital tract in women, periods in life of women and their separate characteristics 2. clinical aspects of evolution and menstrual cycle, menstrual problems and premenstrual syndrome, sexual hormones 3. symptoms and signs of gynecologic diseases and conditions, clinical evaluation of a gynecology patient, gynecologic history, general and pelvic examination, breast self exam and clinical examination of breasts (breast ultrasound) 4. diagnostic methods in gynecology (laboratory: biochemistry, microbiology, cytopathology, cytogenetics, as well as imaging methods such as radiology, ultrasound, colposcopy, endoscopy-hysteroscopy and laparoscopy, etc.) 5. functional and psychosomatic diseases in gynecology, pain-syndrome in gynecology 6. precancerous, benign and malignant diseases of female genitals and breasts 7. inflammatory and sexually-transmitted diseases of female genitals, urogynecologic diseases and conditions 8. infertility, human reproduction, fertility control (contraception), family planning 9. emergency in gynecology, first aid in the general medical office, malpractice, medical malpractice and professional liability 10. gynecologic surgery (operative oncogynecology, urogynecology and minimally invasive gynecologic surgery: hysteroscopy and laparoscopy),

	postoperative depressive syndrome in gynecologic patients 11. diseases of the breasts in women, preventative gynecology in primary level of healthcare 12. guidelines of general and reproductive health in women in contemporary societies, unfavourable environmental influences on women's health **Practical training:** 1. taking and interpretation of gynecologic history, properly and completely 2. pelvic exam under vaginal specula / ecarters, bimanual pelvic exam and evaluation of all female genital organs 3. recto-vaginal and rectal examination, examination for determining inguinal/femoral hernias, palpation of the abdomen 4. catheterization (with Nelaton's and Foley's catheter), giving enema 5. taking cervical and vaginal bacterial swabs, as well as for chlamydia and mycoplasma / ureaplasma, perineal/perianal swab for group B streptococcus 6. taking Pap-smears (classical and cyto-screen / cyto-fast) 7. recognition of cervical pathology with acetic acid and Lugol's solution, colposcopy-normal and pathological colposcopic findings, colposcope as an instrument 8. evaluation of the extent of genital bleeding (distinction between spotting, slugging, medium and profuse bleeding) and determining the level of emergency, vaginal tamponade, observation of demonstration of uterine tamponade 9. patient preparation for gynecologic surgery 10. recognizing instruments and devices for gynecologic surgery, recognizing the most frequent devices and instruments in gynecology, sterilization of instruments

	11. education about preventive monthly breast self-exam in women, performance of preventive annual clinical breast examination in women, breast ultrasound 12. education and psychological support of infertile couple, education and psychological support in post-operative depression syndrome in gyn patients			
12.	**Learning methods:** Theoretical Interactive lectures, problem-solving cases, practical exercises on phantom-dolls, simulations, practical training with patients under supervision, individual projects with mentor, research studies, practice in various environments (medical office, hospital, clinic, outdoors)			
13.	**Total available time**		5 ECTS x 30 h = 150 hours	
14.	**Distribution of the available time**		30+30+15+15+60 = 150 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**Theoretical lectures**	**30 hours**
		15.2.	**Practical training (clinical, laboratory, auditory, seminars, team-work)**	**30 hours**
16.	**Other forms of learning activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**15 hours**
		16.3.	**Home learning**	**60 hours**
17.	**Methods of assessment**			
	17.1.	**Tests (2 written tests, 20 points each)**		**40 points**
	17.2.	**Seminars (paper/project –presentation)**		**10 points**
	17.3.	**Activity and participation in lectures and practice**		**20 points**
	17.4.	**Final exam (oral)**		**30 points**

18.	**Assessment Criteria (points /score)**	**up to51points**	**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.	**Signature requirement and passing the final exam**	Minimum 42 points of all pre-exam activities (lectures, practice, tests, project work)	
20.	**Language of teaching / studying**	English	
21.	**Method of monitoring the quality of teaching**	Methods (self-evaluation and external evaluation) according to Macedonian Law and Rules and Regulations of UGD-Stip	

22.	**Literature**					
	22.1.	**Required obligatory literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Prof. Gligor Dimitrov, MD, PhD; Assistant Andrijana Sterjovska-Aleksovska, MD	Authorized lectures in Gynecology		2013
		2.	Mladenovic D. et al.	Gynecology and Obstetrics	Institution for University manuals, Belgrade	2008
		3.	Ristic Lj.	Practical gynecology	Freemental, Belgrade	2006

	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Berek and Novak	Gynecology	Translated by Tabernakul, Skopje	2011
		2.	DiSaia and Creasman	Clinical Gynecologic Oncology	Translated by Tabernakul, Skopje	2011
		3.	Callen	Ultrasound in Obstetrics and Gynecology	Translated by Tabernakul, Skopje	2011
		4.	Hoffman	Williams Gynecology 2nd ed.	McGraw Hill	2012
		5.		The Johns Hopkins Manual of Gynecology and Obstetrics	Translated by Ars Lamina (ALamina), Skopje	
		6.	Goldman и Ausiello	Cecil Medicine 23rd edition, Section Women's Health	Translated by Tabernakul, Skopje	

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Otorhinolaryngology**			
2.	**Code**	3MF116912			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	ninetht semester	**7.**	**Number of credits**	4
8.	**Professor (s)**	Doc d-r Marina Davceva Cakar			
9.	**Requirements for enrollment the Course**	enrolled fourth year			
10.	**Purposes of the curriculum (competencies):**familiarize students with the basic elements of diagnosis, therapy and prophylaxis of Otorhinolaryngology.				
11.	**Content of the course program:** Theoretical study units 1. Introduction, basic terms in ORL.				

	2. Physiology of Hearing and hearing aid . 3. Disorders of the vestibular apparatus . 4. Congenital deafness . Presbiacuzy . 5. Paralysis of n. facialis. 6. Ear infections . 7. Paranazal sinus - symptoms , diagnosis and treatment of diseases . 8. Benign and malignant diseases of the salivary glands . 9. Carcinoma of the oral cavity and pharynx . 10. Diseases of the larynx and vocal cords . 11. Cancer of the larynx . 12. Injuries of the upper airway . Practical teaching units 1. Review of patient with disease of the organ of hearing and balance . 2. Audiometry . 3. Presentation of case Menier syndrome . 4. Presentation case with secondary infection of the ear . 5. Presentation of congenital deafness . 6. Review of patient with disease of the upper respiratory tract , oral cavity and larynx . 7. Presentation case with chronic sinusitis . Ozena 8. Presentation case with neoplasm of saliva glands . 9. Presentation case with benign polyps of the vocal cords.

	10. Presentation case with cancer of the larynx . 11. Presentation of the patient with obstruction of the airway foreign body . 12. Presentation case with Bell's palsy			
12.	**Learning methods:** Theoretical Lectures, Practical Exercises, Term papers, Individual Presentation;			
13.	**Total available time**		4 ECTS x 30 h = 120 hours	
14.	**Distribution of available time**		30+15+15+15+45 = 120 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	30 hours
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	15 hours
16.	**Other forms and activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**15 hours**
		16.3.	**Home learning**	**45 hours**
17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		**70 points**
	17.2.	**Seminars (paper/project - presentation: written**		**10 points**

		and/or oral)	
	17.3.	**Activity and participation**	**20 points**
18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	60% success from all pre-exam activities, 42 points from 2 colloquiums, term paper, lectures and exercises	
20.	**Language of teaching / study**	**English**	
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**	

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	**R. Probst et al.**	**Basic Otorhinolaryngology**	**Thieme**	**2007**
		2.				
		3.				
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**

		1.				
		2.				
		3.				

Annex No.3	**Program of the Course - first cycle studies**				
1.	**Title of the Course**	**Orthopedics and Traumatology**			
2.	**Code**	3MF117812			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	Twelfth	**7.**	**Number of credits**	2
8.	**Professor (s)**	Prof. d-r Gjorgji Zafiroski			
9.	**Requirements for enrollment the Course**	Lectures, exercises, test, oral examination			
10.	**Purposes ofthe curriculum (competencies):** good knowledge of the area of orthopaedic surgery and tramatology for general practitioners				
11.	**Content of the course program:** 1.Development disorders of the hip joint				

	2.Pes equinovarus and others congenital diseases of the foot 3.Torticollis congenital and others congenital disease of the cervical area 4.Juvenil osteonecrosis 5.Degenerative disease of the joints 6.TBC of the OAS 7.Osteomyelitis 8.Scoliosis and kyphosis 9.Musculoskeletal tumors 10.Traumatology of the musculoskeletal system and pseudoarthrosis 11.Theumatoid arthritis and orthopaedic problems 12.Orthotics and prothetics			
12.	**Learning methods:** – Lectures, practical exerice , term papers, presentations			
13.	**Total available time**		2 ECTS x 30 h = 60 hours	
14.	**Distribution of available time**		30+0+15+5+10 = 60 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	30 h
		15.2.	**theoretical and practical exercises,**	0 h

			e-exams, preparation of independent seminar work	
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**5 hours**
		16.3.	**Home learning**	**10 hours**

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**

18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	60% or minimum 42 points on all grounds (lectures, exercise, colloquia, etc)	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**	

22.	**Literature**	
	22.1.	**Required literature**

		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Zafiroski G.	Children orthopaedics	Kultura	2003
		2.	Adam Greenspan	Orthopaedic imaging	Lippincott	2004
		3.				
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	M.Tachdjian	Clinical pediatric orthopaedics	Appleton& Lange	1997
		2.				
		3.				

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Ophthalmology**			
2.	**Code**	**3MF130512**			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medicine General Medicine Department of Ophthalmology			
5.	**Cycle (first, second and third cycle)**	First cycle			
6.	**Academic year / semester**	ninth	**7.**	**Number of credits**	4
8.	**Professor (s)**	Prof. Dr. Milica Ivanovska			
9.	**Requirements for enrollment the Course**	Enrolled fifth year			
10.	**Purposes of the curriculum (competencies):** **Introduction to the basic procedures for diagnosing eyes diseases and their treatent**				
11.	**Content of the course program:**				

<table>
<tr><td></td><td colspan="4">

Inflamations of the anterior segment of the eye
Degenerations and tumors of the anterior segment of the eye
Diseases of the orbit
Glaucoma
Cataract
Vascular diseases of the retina
Diabetic rethinopathy
Degenerations of the posterior segment of the eye
Retinal detachment
Tumors of the eye
Optic nerve diseases
Eye trauma
Refractive disorders

</td></tr>
<tr><td>12.</td><td colspan="4">Learning methods:

– Lectures
– Practical work
– Seminars with oral presentations</td></tr>
<tr><td>13.</td><td colspan="2">Total available time</td><td colspan="2">4 ECTS x 30 h = 120 hours</td></tr>
<tr><td>14.</td><td colspan="2">Distribution of available time</td><td colspan="2">30+15+15+15+45 = 120 hours</td></tr>
<tr><td rowspan="2">15.</td><td rowspan="2">Forms of teaching / learning activities</td><td>15.1.</td><td>lectures / theoretical - contact teaching,
e-teaching</td><td>30 h</td></tr>
<tr><td>15.2.</td><td>theoretical and practical exercises,
e-exams, preparation of independent seminar work</td><td>15 h</td></tr>
</table>

16.	**Other forms and activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**15 hours**
		16.3.	**Home learning**	**45 hours**
17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**		**10 points**
	17.3.	**Activity and participation**		**20 points**
18.	**Assessment Criteria (points /score)**		**up 50points**	**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.	**Signature requirement and passing the final exam**	60% or minimum 42 points on all grounds (lectures, exercise, colloquia, etc)		
20.	**Language of teaching / study**	English		
21.	**Method of monitoring the quality of teaching**	Self-evaluation, colloquium results, results from oral examination		

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	J.K. Kanski	Clinical		2012

				ophthalmology		
		2.	S. Bratford	Basic concepts in ophthalmology		2010
		3.	Spalton	Ophthalmological atlas		2010
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				
		2.				
		3.				

Annex No.3	**Program of the Course - first cycle studies**				
1.	**Title of the Course**	**Anesthesiology and reanimation**			
2.	**Code**				
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit orinstitute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	ninth semester	**7.**	**Number of credits**	2
8.	**Professor (s)**	Prof. d-r Ordan Nojkov			
9.	**Requirements for enrollment the Course**	enrolled fifth year			
10.	**Purposes of the curriculum (competencies):**Students are introduced to basic and modern methods in anesthesiology practice and the basic principles and procedures of resuscitation				
11.	**Content of the course program:** Theoretical study units				

	1. Introduction . types of anesthesia 2. Drugs used in anesthesia and their influence on the organism 3. Anesthesiology examination and preparation for anesthesia 4. Perioperative monitoring and management of patients in anesthesia 5.Postanesthisology recovery and complications 6. Regional anesthesia 7. Escort and local anesthesia 8. Resuscitation , basic life support 9. Resuscitation , advanced life support 10. Intensive treatment of comatose ill 11. Intensive treatment of sick with respiratory failure 12. Intensive treatment of sick with electrolyte imbalance and shock Practical teaching units 1. Anesthesiology Review - Classification by ASA 2. Anesthesia machine , components , method of operation 3. local anesthesia 4. Regional anesthesia - spinal anesthesia 5. Artificial respiration and heart massage 6. Providing airway - AMBU , airway 7. Providing airway - endotracheal intubation , laryngeal massage 8. Defibrillation - indications and procedure 9. Application of drugs

	10. Therapy with crystalloid and colloid in shock 11. transfusion therapy 12. tracheotomy			
12.	**Learning methods:** Theory Interactive teaching: lectures in large group discussions and engaging students. Multimedia presentation. E-learning. Individual consultations with students and consultation groups. practical instruction Practical laboratory exercises in small groups. Final drill.			
13.	**Total available time**		2 ECTS x 30 h = 60 hours	
14.	**Distribution of available time**		15+15+15+10+20 = 60 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	15 hours
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	15 hours
16.	**Other forms and activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**10 hours**
		16.3.	**Home learning**	**20 hours**
17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		**70 points**

	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**
18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	60% from all pre-exam activities, min 42 points from 2 colloquiums, term paper, lectures and exersice	
20.	**Language of teaching / study**	**English**	
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**	

22.	**Literature**					
		Required literature				
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.1.	**1.**	P. Lalevic	Anesteziologija	Zavod za udzbenike, Beograd	1999
		2.	D. Vucovic	Intenzivna terapija	Zavodzaudžbenikeinastavnasredstva	1998
		3.				
	22.2.	**Additional literature**				

		No.	Author	Title	Publisher	Year
		1.	Robert K. Stoelting Ronald D. Miller	Basic concepts in Anesthesia: with Evolve Website, 5e	Churchill livingstone, Elsevier	2007
		2.				
		3.				

Annex No.3	**Program of the Course - first cycle studies**				
1.	**Title of the Course**	**Maxillofacial surgery**			
2.	**Code**				
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	nintht	**7.**	**Number of credits**	2
8.	**Professor (s)**	Prof. d-r Vladimir Popovski			
9.	**Requirements for enrollment the Course**	enrolled fifth year			
10.	**Purposes of the curriculum (competencies):** Introducing diseases in maxillofacial region and neck infections and injuries of the head and neck.				
11.	**Content of the course program:** Theoretical study units : - Introduction to the course maxillofacial surgery , history				

	- Inflammation of the face, head and neck - Acute inflammation with fast flow (abscesses and flegmonas) on the face and neck - Acute inflammation of the jaw , osteomyelitis - Acute sinusitis , chronic sinusitis - Pathology of the salivary glands , inflammatory syndromes . - Cysts of the head and neck - Classification of soft tissue cysts in the neck - Fractures of the upper jaw , Le Fort classification , fracture of skull base fractures of the bones of the face and head - Treatment of fractures of the upper jaw and the bones of the face and head - Fractures of the lower jaw , classification , diagnostic methods - Treatment of fractures of the lower jaw . Practical teaching units : - Introduction to the course maxillofacial surgery , history - Inflammation of the face, head and neck - Acute inflammation with fast flow (abscesses and flegmonas) on the face and neck - Acute inflammation of the jaw , osteomyelitis - Acute sinusitis , chronic sinusitis - Pathology of the salivary glands , inflammation , cysts syndrome. Classification of the soft tissue cysts of the neck - Fractures of the upper jaw , Le Fort classification , fracture of skull base fractures of the bones of the face and head

	- Treatment of fractures of the upper jaw and the bones of the face and head - Fractures of the lower jaw , classification , diagnostic methods - Treatment of fractures of the lower jaw.			
12.	**Learning methods: Lectures, preclinical laboratory exercises, consultations.** – Lectures – Practical exercise – Seminras – Presentations			
13.	**Total available time**		2 ECTS x 30 h = 60 hours	
14.	**Distribution of available time**		30+0+15+5+10 = 60 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	**30 hours**
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**5 hours**
		16.3.	**Home learning**	**10 hours**
17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		**70 points**

	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**
18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	Regularity and activity of theoretical and practical instruction, independent project work, passed a practical exam	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	Self-evaluation	

22.	**Literature**					
		Required literature				
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.1.	**1.**	Peterson	Principles of oral and maxillofacial surgery	Springer	2003
		2.				
		3.				
		4.				
	22.2.	**Additional literature**				

		No.	Author	Title	Publisher	Year
		1.	Todorovic Lj.	Anestezija vo stomatologija		
		2.				
		3.				

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Sexually transmitted diseases**			
2.	**Code**	3MF121412			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	ninetht	**7.**	**Number of credits**	2
8.	**Professor (s)**	Velo Markovski, PhD			
9.	**Requirements for enrollment the Course**	Enrolled fifth year			
10.	**Purposes of the curriculum (competencies):** Etiology,epidemiology and significance for human pathology, social psychological and economic effects of sexually transmitted diseases, the prevention of sexually transmitted diseases, diagnosis and treatment				
11.	**Content of the course program:** 1.Meaningofsexuallytransmitteddiseases, identification, protection, diagnosisandtreatment				

	2. Urinary infections 3. Genital andAnorectalinfections 4. HPVinfections 5. HIV 6. HepatitisB 7. Herpesvirus infections 8. Sifilis 9. Gonorrhea 10. Clamidijaandureaplasmas 11. Genitalwarts 12. Fungalandparasitic genital infections			
12.	**Learning methods: theoretical and practical lectures:** - Lectures - Practical exercise - Seminars - Presentation			
13.	**Total available time**		2 ECTS x 30 h = 60 hours	
14.	**Distribution of available time**		30+0+15+5+10 = 60 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	**30 hours**
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**

		16.2.	**Individual tasks**	**5 hours**
		16.3.	**Home learning**	**10 hours**

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**

18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	60% or minimum 42 points on all ground	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	Self-evaluation	

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	V. K. Sharma	Sexually transmitted diseases and AIDS	Springer	**2006**

		2.				
		3.				
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				
		2.				
		3.				

Annex No.3	**Program of the Course - first cycle studies**				
1.	**Title of the Course**	**Pediatrics 2**			
2.	**Code**	3MF117512			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of medical sciences Department of internal diseases			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	tenth semester	**7.**	**Number of credits**	6
8.	**Professor (s)**	Prof d-r Elizabeta Zisovska			
9.	**Requirements for enrollment the Course**	Confirmed ninth and assigned tenth semester			
10.	**Purposes ofthe curriculum (competencies):** Introduction to the specific Pediatrics, and the diseases of the particular systems in the pediatric age, diagnosis and therapy				
11.	**Content of the course program:** • diseases of the respiratory system in childhood • diseases of the cardiovasculary system in childhood • diseases of the gastrointestinal system in childhood • diseases of the nervous system in childhood				

	• diseases of the endocrine system and rheumatic diseases in childhood • diseases of the urinary system in childhood • diseases of the metabolism and nutrition in childhood • diseases of the locomotor system in childhood • hemato-oncologic diseases in childhood • infections in children • surgical problems in childhood • emergency in childhood; psychological and mental diseases **Practical educational units: discussion and work out (completition):** • case scenarios/patients with respiratory diseases (history, physical examination, therapy) • case scenarios/patients withcardiovascular diseases (history, physical examination) • case scenarios/patients withgastrointestinal diseases (history, physical examination) • case scenarios/patients withnervous diseases (history, physical examination) • case scenarios/patients withendocrine or rheumatic diseases (history, physical examination) • case scenarios/patients withurinary diseases (history, physical examination) • case scenarios/patients withnutrition disturbances • case scenarios/patients withhemato-oncologic diseases (history, physical examination) • case scenarios/patients withinfections (history, physical examination, therapy) • admission and management of a child in emergency • rational use of medicines in childhood • management of children with special needs	
12.	**Learning methods:** -lectures, problem based learning, computer learning, detailed work out of a particular topic and writing a paper on an assigned topic, consultation, taking the history and physical examination of thechild, understanding the results, interpreting X-ray pictures, CT scans,	
13.	**Total available time**	6 ECTS x 30 h = 180 hours
14.	**Distribution of available time**	45+30+15+30+60 = 180 hours

15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	45 hours
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	30 hours
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**30 hours**
		16.3.	**Home learning**	**60 hours**

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**40 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**
	17.4	**Practical and final exam**	**30 points**

18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	• **Cumulative sum of the points based on presence, activity, practical units, coloquia, and project-activity paper** • **The coloquia are independent one**	

		from another • **The final exam is not dependant on the coloquia, but the pre-requisition for the final exam is the total number of cumulative points 42 and more** • **In a case of insuficient number of points for the final exam, there is an option for additional kind of activity (coloquium, project activity, etc) if there are required number of students**
20.	**Language of teaching / study**	**English**
21.	**Method of monitoring the quality of teaching**	**Students' evaluation and Self-evaluation**

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Zitelli B.G and Davis H. V	Atlas for pediatric physical diagnostics	Tabernacul	2011
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		2.	Zergollern L, Votava-Raic A, and all	Pedijatrija 1-2	Lijevak-Naprijed, Загреб	1993

		3.	Internet based resources	www.who.int www.unicef.org		

Annex No.3	**Program of the Course - first cycle studies**				
1.	**Title of the Course**	**Surgery 2**			
2.	**Code**	3MF117512			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	tenth semester	**7.**	**Number of credits**	6
8.	**Professor (s)**	Prof. d-r Zivko Popov			
9.	**Requirements for enrollment the Course**	enrolled fifth year			
10.	**Purposes ofthe curriculum (competencies):**Acquiring knowledge about surgical principles of abdomen and thorax				
11.	**Content ofthecourse program:** 1. Acute abdomen				

	2. Hernias 3. Ileus 4. Stomach 5. Small and large intestine 6. Hepatobilliary tract 7. Surgery of gl. mammae 8. Surgery of thyroid 9. Surgery of pleura 10. Echinococcosis of the lungs 11. Surgery of the thorax 12. Injuries of thorax and abdomen			
12.	**Learning methods:** Theoretical Lectures, Practical Exercises, Term papers, Individual Presentation;			
13.	**Total available time**		6 ECTS x 30 h = 180 hours	
14.	**Distribution of available time**		45+30+15+30+60 = 180 hours	
15.	**Forms of teaching /**	**15.1.**	**lectures / theoretical - contact teaching,**	45 hours

	learning activities		**e-teaching**	
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	30 hours
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**30 hours**
		16.3.	**Home learning**	**60 hours**

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**

18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	60% from all pre-exam activities, min 42 points from 2 colloquiums, term paper, lectures and exersice	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**	

22.	**Literature**					
		Required literature				
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.1.	**1.**	J. Panovski	General Surgery	Skopje	1983
		2.	J. Panovski	Specialised Surgery	Skopje	1988
		3.				
		Additional literature				
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.2.	**1.**	Doherty, G. Way,L. Current	Surgical Diagnosis and treatment	Lange Medical Books/McGraw- Hill	2006
		2.				
		3.				

Annex No.3	Program of the Course-first cycle studies

1.	**Title of the Course**	**Obstetrics and Gynecology 2**			
2.	**Code**	3MF116012			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, faculty, department)**	University “Goce Delcev” – Stip, Macedonia Faculty of Medical Sciences - Stip Department of Obstetrics and Gynecology			
5.	**Cycle (first, second and third cycle)**	first and second cycle of integrated academic studies			
6.	**Academic year / semester**	tenth semester	**7.**	**Number of credits**	6
8.	**Professor (s)**	Gligor Dimitrov, MD, PhD			
9.	**Requirements for enrollment in the Course**	enrolled fifth year, professor’s signature for finished course in Obstetrics and Gynecology 1			
10.	**Purposes of the curriculum (competencies):**Acquiring knowledge, skills and competencies for prevention, diagnosis and treatment of obstetrical conditions and diseases in pregnant women, through theoretical interactive lectures and hands-on practical training under supervision. **Predicted outcome of the course:** Medical student-future MD (general practitioner/family doctor) will be fully trained to work in the primary level of				

	healthcare (medical office for general family practice), to prevent, diagnose, treat and follow-up certain number of obstetrical diseases and conditions in pregnant women, to perform prenatal follow up of normal pregnancy, to perform a normal vaginal delivery, breech delivery and primary resuscitation of the newborn, to provide competent first aid in emergency obstetrical situations as well as to be able to recognize the need for referral to a specialist obstetrician/gynecologist in a higher level of healthcare (for consultation or hospitalization).
11.	**Content of the course program:** **Theoretical lectures:** 1. introduction and historical development of obstetrics, physiology of human reproduction, conception, diagnostics of pregnancy 2. morphological and functional development of the embryo and fetus, placenta and fetal membranes, placental hormones, maternal adaptation to the pregnancy, normal and abnormal female pelvises 3. normal: pregnancy, labor, delivery and puerperium 4. risk, pathological and problem pregnancy, abnormal labor, delivery and puerperium, complications of normal and breech delivery, multiple gestation 5. antenatal healthcare, prenatal screening and diagnostics in pregnancy 6. diseases and abnormalities of the placenta and fetal membranes, diseases and abnormalities of the fetus and newborn 7. usage of medicines in pregnancy and breastfeeding, hygiene, nutrition and dietetics in pregnancy, oral health in pregnancy 8. characteristics of obstetric history, examination and clinical evaluation of a pregnant woman and parturient woman 9. obstetric preventative programs, follow up of normal pregnancy, contemporary active management of normal and breech labor and delivery in

	primary level of healthcare 10. indications for cesarean section and other obstetrical operations and interventions, instrumental vaginal delivery, repair of tears of the lower genital tract, episiotomy, sutures 11. types and techniques of abortion, first aid and management of complications and emergency obstetrical conditions / situations 12. unfavorable environmental influences on the health of the pregnant woman and the fetus, guidelines for general and reproductive health of women in contemporary societies, maternal and perinatal mortality rate, health education in pregnancy and puerperium, medico-legal aspects of pregnancy and delivery **Practical training:** 1. complete and proper taking and interpreting of obstetrical history 2. signs of pregnancy on bimanual obstetrical exam, antenatal follow ups of normal pregnancy month-by-month, different follow up in each lunar month, interpretation of results, education of the pregnant woman about hygiene and nutrition in pregnancy 3. healthcare of a pregnant woman, recommendations and education of the pregnant women about every aspect of the life in pregnancy, education of the couple in the School for parents: education and psychological support in preparation for labor and delivery, breastfeeding and taking care for the newborn, preservation of stem cells from cord blood and cord tissue after delivery, UNICEF concept: Hospitals-friends of mothers and babies 4.Leopold maneuvers, listening to fetal heartbeat with Pinnard's fetoscope, cardiotocography for fetal heart / uterine contractions tracing, differentiation between normal, non-reassuring and pathological non-stress test, assessment of the need for urgency 5. preparation of the parturient woman for labor and delivery, pelvic measurement, management of normal labor, catheterization with Nelathon's

	and Foley's catheter, giving enema 6. contemporary active management of normal labor and delivery 7. first care and primary resuscitation of the newborn immediately after delivery, assessment of the detouchment of placenta in the third phase of delivery, follow up vital parameters and the amount of bleeding in the fourth phase of delivery 8. breech delivery (manual help-Bracht maneuver, manual extraction-Mauriceau-Smellie-Veit maneuver) 9. education for breastfeeding, methods for management of plugged milk duct, medical nurse home patronage 10. preparation for obstetric operation: caesarean section, cerclage, instrumental vaginal delivery 11. instruments and devices for abortion, obstetrical operation/surgery/intervention 12. education and psychological support of an infertile couple, for postoperative depressive syndrome and situations after artificial abortion, spontaneous miscarriage, preterm premature delivery, fetal demise, stillbirth, neonatal death, etc.			
12.	**Learning methods:** Theoretical Interactive lectures, problem-solving cases, practical exercises on phantom-dolls, simulations, practical training with patients under supervision, individual projects with mentor, research studies, practice in various environments (medical office, hospital, clinic, outdoors)			
13.	**Total available time**		6 ECTS x 30 h = 180 hours	
14.	**Distribution of the available time**		45+30+15+15+75 = 180 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**Theoretical lectures**	**45 hours**
		15.2.	**Practical training (clinical, laboratory,**	**30 hours**

			auditory, seminars, team-work)	
16.	**Other forms of learning activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**15 hours**
		16.3.	**Home learning**	**75hours**

17.	**Methods of assessment**		
	17.1.	**Tests (2 written tests, 20 points each)**	**40 points**
	17.2.	**Seminars (paper/project –presentation)**	**10 points**
	17.3.	**Activity and participation in lectures and practice**	**20 points**
	17.4.	**Final exam (oral)**	**30 points**

18.	**Assessment Criteria (points /score)**	**up to51points**	**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.	**Signature requirement and passing the final exam**	Minimum 42 points of all pre-exam activities (lectures, practice, tests, project work)
20.	**Language of teaching / studying**	English
21.	**Method of monitoring the quality of teaching**	Methods (self-evaluation and external evaluation) according to Macedonian Law and Rules and Regulations of UGD-Stip

22.	**Literature**					
	22.1.	**Required obligatoryliterature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Prof. Gligor Dimitrov, MD, PhD	Authorized lectures in Obstetrics		2013
		2.	Mladenovic D. et al.	Gynecology and Obstetrics	Institution for University manuals, Belgrade	2008
		3.	Ristic Lj.	Practical obstetrics	Freemental, Belgrade	2001
		4.	Pschyrembel	Practical obstetrics	Medical book, Belgrade-Zagreb	1985
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Gabbe et al.	Obstetrics: normal and problem pregnancies	Translated by Tabernakul, Skopje	2011
		2.	Cunningham, Leveno, Bloom и сор.	Williams Obstetrics: 23rd edition	Ars Lamina (ALamina)	
		3.	Callen	Ultrasound in Obstetrics and Gynecology	Translated by Tabernakul, Skopje	2011
		4.		The Johns Hopkins Manual of Gynecology and Obstetrics	Translated by Ars Lamina (ALamina), Skopje	
		5.	Goldman и Ausiello	Cecil Medicine 23rd	Translated	

				edition, Section Women's Health	by Tabernakul, Skopje	
		6.	Moore and Persaud	The Developing Human: Clinically Oriented Embryology	Translated by Tabernakul, Skopje	2011

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Emergency medicine**			
2.	**Code**	3MF115312			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	tenth semester	**7.**	**Number of credits**	2
8.	**Professor (s)**	Prof. d-r Ordan Nojkov			
9.	**Requirements for enrollment the Course**	enrolled fifth year			
10.	**Purposes of the curriculum (competencies):**Students who have already studied this content, you need to learn to deal with them in the practice of emergency aspect. We will emphasize the provision of vital functions through general resuscitative measures, and then providing specific therapy.				

	In practical instruction through elaborate clinical scenarios student should learn the procedure for dealing with various emergency situations
11.	**Content of the course program:** 1. Definition of emergency in medicine. Basic principles of treatment . 2. Shock (hemorrhagic, traumatic, cardiac, septic, anaphylactic) 3 Emergencies in cardiology (acute heart failure , rhythm disorders , coronary syndrome , acute myocardial infarction) 4 Pulmology emergencies (acute respiratory failure, asthmatic status, pneumothorax,pulmonary embolism) 5 Emergencies in GIT (" upper " and " lower " digestive bleeding , mesenteric thrombosis , pancreatitis , acute liver failure) 6 Emergencies in nephrology (acute renal failure, uremic syndrome , renal colic , hypertensive crisis) 7 Emergencies in endocrinology (diabetic ketoacidosis , hypo and hyperglycaemic coma , thyrotoxic crisis) 8 Toxicology (poisoning by drugs , pesticides , corrosive substances , ideological poisons mushrooms . Basic principles of treatment and antidotes) 9 Emergency situations in neurology (cerebrovascular stroke , status epilepticus , miastenia crisis , headache) 10 Emergency situations in psychiatry (depression, psychomotor agitation , psychotic conditions , forced hospitalization) 11 Emergency conditions in gynecology and obstetricijata (bleeding in the first trimester of pregnancy , placenta previa, abruptio placentae, ruptura uteri , etc. .) 12 Emergency situations in pediatrics (convulsive syndrome , acute dehydration , neonatal asphyxia , premature newborn care)

12.	**Learning methods:** Theoretical Lectures, Practical Exercises, Term papers, Individual Presentation;			
13.	**Total available time**		2 ECTS x 30 h = 60 hours	
14.	**Distribution of available time**		15+15+15+5+10 = 60 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	15 hours
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	15 hours
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**5 hours**
		16.3.	**Home learning**	**10 hours**
17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**		**10 points**
	17.3.	**Activity and participation**		**20 points**
18.	**Assessment Criteria (points**		**up 50points**	**5(five) (F)**

	/score)	**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.	**Signature requirement and passing the final exam**	Minimum 42 points of all pre-exam activities (lectures, practice, tests, project work)	
20.	**Language o fteaching / study**	**English**	
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**	

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Marx J et al.	Rosen's Emergency Medicine	MOSBY, Elsevier	2011
		2.				
		3.				
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Marx J et al.	Rosen's Emergency Medicine	MOSBY, Elsevier	2011
		2.				
		3.				

Annex No.3	**Program of the Course - first cycle studies**				
1.	**Title of the Course**	**Forensic medicine**			
2.	**Code**	3MF117212			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	tenth semester	**7.**	**Number of credits**	4
8.	**Professor (s)**	Prof. Aleksej Duma, MD, PhD			
9.	**Requirements for enrollment the Course**	enrolled fifth year			
10.	**Purposes ofthe curriculum (competencies):**Introduction to basic principles and laws in forensic medicine. Acquiring knowledge of forensic medicine, expertise and forensics.				
11.	**Content of the course program:**				

	Theoretical lectures: 1. History of forensic medicine in Republic of Macedonia 2. Forensic expertise from documents 3. Forensic expertise in mechanical traumas, blunt force trauma, trauma from sharp objects, guns and explosives 4. Forensic expertise in traffic accidents 5. Etiology and causes of death in mechanical injuries, general in local signs 6. Thanatology, forensic examination of body 7. Mechanical asphyxiation – strangulation 8. Forensic examination on living people, body injuries, legal and medical criteria 9. Forensic examination in victims of rape, incest, criminal abortion. 10. DNA – expertise. Fatherhood test, blood analyses 11. Forensic serology 12. Toxicology Practical exercise 1. Forensic autopsy on corpse 2. Forensic autopsy on corpse 2nd part 3. Laboratory analyses in forensic autopsy 4. Forensic expertise in traffic accidents. Gross anatomy and autopsy 5. Examination on living person – body injuries 6. Examination on living person – incest, victim of sex offenders 7. Forensic autopsy in sudden death

	8. Forensic autopsy in sudden death – 2nd part 9. Forensic expertise in determine fatherhood 10. Crime scene investigation, collecting biological evidence 11. Crime scene investigation, collecting biological evidence, 2nd part 12. Forensic expertise from documents			
12.	**Learning methods:** Theoretical Lectures, Practical Exercises, Term papers, Individual Presentation;			
13.	**Total available time**		4 ECTS x 30 h = 120 hours	
14.	**Distribution of available time**		30+15+15+15+45 = 120 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	30 hours
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	15 hours
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**15 hours**
		16.3.	**Home learning**	**45 hours**

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**
18.	**Assessment Criteria(points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	Attendance on lectures and exercises, successfully passed exams on subject of Pathology 1 and 2	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	Self-evaluation	

22.	**Literature**					
		Required literature				
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.1.	**1.**	Andrew R.W Jackson	Forensic Science (2nd Edition)	Tabernakul	2012
		2.	M. Milovanovic	Forensic medicine	Knizara polet,	

					Beograd	
		3.	M. Tasic et al	Forensic medicine		2007

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Occupational medicne**			
2.	**Code**	3MF121612			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	tenth semester	**7.**	**Number of credits**	2
8.	**Professor (s)**	Doc. d-r Jovana Karadzinska-Bislimovska			
9.	**Requirements for enrollment the Course**	enrolled fifth year			
10.	**Purposes ofthe curriculum (competencies):** Acquiring theoretical and practical knowledge from the area of occupational medicine				
11.	**Content of the course program:** 1. Physiological and psychological aspects of occupation 2. Ergonomic principles of work place. Occupational risks				

	3. Analyses and health assessment of working environment and risk assessment 4. Ecological and biological monitoring. Readiness of workers for response in danger situations 5. Assessment of work ability. Health and security in work 6. Occupational diseases, diseases in work, injuries at work 7. Chemical factors of work environment – occupational toxicology 8. Physical factors of work environment – noise, non-ionizing radiation, ionizing radiation and vibrations 9. Occupational intoxications: gases, organic dissolvent, cadmium, manganese, chrome, nickel, beryllium 10. Occupational intoxications: led and compounds, mercury and compounds and pesticides 11. Occupational malignant diseases 12. Allergic alveolitis. Occupational dermatoses.	
12.	**Learning methods:** Theoretical Lectures, Practical Exercises, Term papers, Individual Presentation;	
13.	**Total available time**	2 ECTS x 30 h = 60 hours

14.	**Distribution of available time**		30+0+15+5+10 = 60 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching, e-teaching**	30 hours
		15.2.	**theoretical and practical exercises, e-exams, preparation of independent seminar work**	
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**5 hours**
		16.3.	**Home learning**	**10 hours**

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**

18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	Minimum 42 points of all pre-exam activities (lectures, practice, tests, project work)	
20.	**Language of teaching / study**	**English**	

21.	**Method of monitoringthe quality of teaching**	**Self-evaluation**

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	J. Karadzinska-Bislimovska, J. Minov, S. Risteska-Kuc, D. Mijakoski, S. Stoleski	Occupational medicine	Medical Faculty Skopje	2011
		2.				
		3.				
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				

Annex No.3	Program of the Course - first cycle studies				
1.	**Title of the Course**	**Family Medicine**			
2.	**Code**				
3.	**Study Program**	General Practitioners			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	Tenth	**7.**	**Number of credits**	2
8.	**Professor (s)**	Doc d-r Biljana Ilievska			
9.	**Requirements for enrolment the Course**	Enrolled fifth year			
10.	**Purposes ofthe curriculum (competencies):** • Family Medicine –introduction and roll of family medicine doctors • Communication skills and family medicine • Introduction on basic features at the presentation of the disease and how to deal with them in terms of a family physician with a special emphasis on keeping patients: acute and chronic illnesses and diseases of addictions				
11.	**Content of the course program:** o Definitions of Family Medicine o Personal health care and family physician in practice o Family influence to the health o Psycho- social influence on health o Preventive health care o Communication in family medicine o Examination technique and patient education				

	○ First aid from family physician perspective ○ Cough and breading disorders management ○ Chest pain –differential diagnosis ○ Chronic respiratory diseases (COPD, Asthma management) from family medicine perspectives ○ Diagnostic algorithm of tuberculosis ○ Rehabilitation of pulmonary diseases ○ Oncology at primary level of health care ○ Tobacco and health ○ Alcohol abuse ○ Interpretation of the basic laboratory examinations (false negative and false positive results-reasons)			
12.	**Learning methods:** interactive lectures, practical classes, project work			
13.	**Total available time**		2 ECTS x 30 h = 60 hours	
14.	**Distribution of available time**		30+0+15+5+10 = 60 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	Lectures / theoretical - contact teaching,	30 hours
		15.2.	Practical exercises, preparationofindependentseminar work	/
16.	**Other forms of activities**	**16.1.**	Project work	15hours
		16.2.	Individual Exercise	5hours
		16.3.	Home learning	10hours

17.	**Method of assessment**		
	17.1.	**Presence and activity at the lectures**	max 10 points
	17.2.	**Individual activity during the semester**	max 10 points
	17.3.	**Tests / continuous knowledge checking**	max 2 x 20points
	17.4.	**Seminars (paper/project - presentation: written and/or oral)**	max 10 points
	17.5.	**Final exam**	max 30 points

18.	**Assessment Criteria (points /score)**	up 50points	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.	**Signature requirement and passing the final exam**	Minimum of 42 points gained through the attendance and active participation on the theoretical, practical work, individual activities and tests.	
20.	**Language of teaching / study**	English	
21.	**Method of monitoring the quality of teaching**	Self-evaluation	

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Rakel et al.	Family Medicine	Tabernakul, Скопје	2011
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Marija Vavlukis Stefan Talevski	Professors authorized lectures		

Annex No.3	Program of the Course - firstcyclestudies

1.	**Title of the Course**	**Urology**			
2.	**Code**	3MF123212			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	tenth semester	**7.**	**Number of credits**	2
8.	**Professor (s)**	Prof. d-r Zivko Popov			
9.	**Requirements for enrollment the Course**	enrolled fifth year			
10.	**Purposes ofthe curriculum (competencies):**Within this subject the students will learn the basic concepts, principles and terminology in urology and connections of theoretical knowledge in urology practice cases.				
11.	**Content of the course program:** 1. Introduction to urology , history and contemporary trends ; 2. Diagnostic methods in urology ;				

	3. Congenital anomalies of UGS ; 4. Infections of UGS ; 5. Obstructive disease ; 6. Urogenital injuries ; 7. Tumours of the kidney 8. Tumors of the bladder ; 9. Tumors of the prostate ; 10. Kidney transplantation ; 11. Surgery of the suprarenal gland ; 12. Vezikoureteral reflux ; Practical exercise 1. Review of urologic patient (history , status of systems , lakalen status) ; 2. Physical examination of the kidney (inspection , palpation and percussion , differentiation between renal and radicular pain) , auscultation of renal Lodge ; 3. Physical examination of the bladder and male external genitalia ; (Inspection , palpation , percussion bladder) (penis inspection , palpation and urethral discharge) . Scrotum and testicles (inspection and palpation and diaphenoskopia) . Epididymis , spermatic cord and vas deferens (inspection , palpation) ; 4. Physical examination vaginal and rectal examination in men Inspection and palpation of the urethra and vagina and test for stress incontinence . Sphincter and lower rectum . , Prostate (size, consistency , mobility , sulcus) , the technique of massaging the prostate . Inguinal and others . Lymph glands , neurological status;

	5. Instrumental view of urinary tract Preliminary procedures (aseptic technique , lubrification of the urethra , anesthesia , calibration of instruments and dimensions) . Catheter (types and sizes of catheters) . Technique of catheterization (the man and the woman) . Percutaneous cystostomia . Metal probes for urethral dilation (technique of placing them) . Cystourethroscopia (instruments , its use, indications and contraindications main) . Transurethral resection lithotripsy (types rezektoskopii , uretrotom , litotriptor for transurethral use) . 6th Injuries of the urogenital system ; Immediate diagnosis and treatment . Injuries bibrezite and ureter . Injuries to the bladder . Injuries to the urethra (front and rear) . Injuries to the scrotum and testicles . Injuries to the penis . 7th Tumors of the urogenital system ; Manifestation of neoplasms of the urogenital system . Symptoms and signs of metastatic changes . Tumors of the renal parenchyma . Tumors of the pyelon, ureter , bladder . Tumors of the prostate , testicles , penis . 8th Urinary obstruction and stasis ; Classification and etiology . Pathogenesis and pathology . Complications and treatment . 9th Urinary calculi ; Diagnostic evaluation . Symptoms and signs of presenting kalkulusite . Renal calculi . Medical therapy . Bladder calculi . Ureteral calculi . Medical therapy . Endouroloshka therapy (transurethral electro and ultrasonographic lithotripsy , ureterorenoskopija) . Extracorporeal lithotripsy "ESWL" (types of cameras) and presenting litotriptor .

12.	**Learning methods:** Theory Interactive teaching: lectures in large group discussions and engaging students. Multimedia teaching. E-learning. Individual consultations with students and consultation groups. practical instruction Practical clinical exercises in small groups. Final drill.			
13.	**Total available time**		2 ECTS x 30 h = 60 hours	
14.	**Distribution of available time**		30+0+15+5+10 = 60 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	30 hours
		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	hours
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**5 hours**
		16.3.	**Home learning**	**10 hours**
17.	**Method of assessment**			
	17.1.	**Tests / oral exams**		**70 points**

	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**
18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	60% success from all pre-exam activities, min 42 points from 2 colloquiums, term paper, lectures and exercises	
20.	**Language o fteaching / study**	English	
21.	**Method of monitoring the quality of teaching**	Self-evaluation	

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	**A. J. Wein et al**	**Urology 10th Edition**	**Springer**	**2013**
		2.				
		3.				
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Geriatrics**			
2.	**Code**	3MF106112			
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	tenth semester	**7.**	**Number of credits**	2
8.	**Professor (s)**	Doc d-r Stefan Talevski			
9.	**Requirements for enrollment the Course**	enrolled fifth year			
10.	**Purposes of the curriculum (competencies):**Acquiring modern knowledge from geriatrics				
11.	**Content of the course program:** 1. Introduction of geriatrics as science 2. Pathophysiology of aging (features, pathophysiological problems and				

	Control) 3. Preventive access for the elderly 4. Features of the respiratory system in old age 5. Cardiovascular disease in the elderly 6. Neurological problems in the elderly. Psyhogeriatrics 7. Endocrinological diseases in the elderly 8. Urology and aging 9. Locomotor problems in the elderly. Geriatric problems in traumatology 10. The most common infectious diseases in geriatrics 11. Peculiarities of resuscitation in geriatrics 12th Physical therapy and rehabilitation geriatrics			
12.	**Learning methods:** lectures, discussion, individual and term papers			
13.	**Total available time**		2 ECTS x 30 h = 60 hours	
14.	**Distribution of available time**		30+0+15+5+10 = 60 hours	
15.	**Forms of teaching / learning activities**	**15.1.**	**lectures / theoretical - contact teaching,** **e-teaching**	30 hours

		15.2.	**theoretical and practical exercises,** **e-exams, preparation of independent seminar work**	0 hours
16.	**Other activities**	**16.1.**	**Project tasks**	**15 hours**
		16.2.	**Individual tasks**	**5 hours**
		16.3.	**Home learning**	**10 hours**

17.	**Method of assessment**		
	17.1.	**Tests / oral exams**	**70 points**
	17.2.	**Seminars (paper/project - presentation: written and/or oral)**	**10 points**
	17.3.	**Activity and participation**	**20 points**

18.	**Assessment Criteria (points /score)**	**up 50points**	**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.	**Signature requirement and passing the final exam**	60% success from all pre-exam activities, min 42 points from 2 colloquiums, term paper, lectures and exercises
20.	**Language of teaching / study**	English
21.	**Method of monitoring the quality of teaching**	**Self-evaluation**

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Landefeld SC, Palmer MR, Johnson MA, Johnson BC, Lyons LW.	Current Geriatric Diagnosis and Treatment.	The McGroww Hill Companies, 2004. New York, USA	2004
		2.				
		3.				
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				
		2.				
		3.				

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Internal Medicine – clinical practice**			
2.	**Code**				
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	eleventh semester	**7.**	**Number of credits**	12
8.	**Professor (s)**	Doc Marija Vavlukis, MD, PhD			
9.	**Requirements for enrollment the Course**	passed exams Internal Medicine			
10.	**Purposes of the curriculum (competencies):**Acquiring with diagnostic and therapeutic procedures in Internal Medicine. • With clinical practice the students – future doctors can use their knowledge acquired in the course of study, in rational and systematic way to give diagnosis of disease or clinical syndrome, to take the right therapeutic procedure, while keeping				

	the professionalism towards the patients, colleagues. After finishing the clinical practice the future doctors will have theoretical knowledge from internal medicine which is for admitting a patient in a hospital, taking anamnesis and clinical examination in different departments. Upon completion of future clinical practice doctors will gain key skills for the modern clinical assessment and treatment. They will be able to independently make the patient's admission, urine analysis, blood tests, pre-transfusion tests with legal documentation, insertion of urinary catheter, rectal examination, rectoskopy, ECG (technique analysis), cardiopulmonary resuscitation, interpretation of RTG white disease, injections (subcutaneously, intramuscularly, intravenously). They will review and possibly assist interventions: sternal puncture and smear, pleural puncture, abdominal puncture, insertion of gastric tube and gastric lavage, insertion of a central venous catheter, measurement of central venous pressure, gastroscopy, tracheal intubation, artificial ventilation, peritoneal dialysis
11.	**Content of the course program:** Specialized practice contains the most important diagnostic and therapeutic principles and procedures in internal medicine: • Taking anamnesis in each department and characteristics of clinical examination in dertments of: o Hematology o Cardiology o Endocrinology o Pulmology

- Gastroenterology
- Nephrology
- Reumatology
- Toxicology
- Family medicine

• Creation of a diagnostic algorithm , a working diagnosis and treatment plan of individual clinical cases

• Analysis of the results of biochemical examinations of urine , blood and smear biochemical markers in blood / plasma , pre - transfusion tests with legal documentation ,

• Mastering the art of admiting of injection (subcutaneous , intramuscular , intravenous) insertion of a urinary catheter , perform rectal examination ,

• Interpretation of Chest lungs radiology

• Interpretation of ECG (technique analysis)

• Performaning , attendance and participation in the eventual interpretation of Echo of heart , coronary strest test Coronarography , PTCA , stenting , cardiopulmonary resuscitation , tracheal intubation , artificial ventilation ,

• Monitoring and assisting interventions : sternal puncture and smear , biopsy of bone and bone marrow , pleural puncture , abdominal puncture , insertion of a gastric tube and gastric lavage , insertion of central venous catheter, measurement of central venous pressure , gastroscopy , biopsy of the kidney , nephrostomy , urocatheterisation , hemodialysis , peritoneal dialysis , intrajoint injection , puncture of the wrist .

12.	**Learning methods:** • Participation in professional meetings clinic • Participation in morning rounds • Participation in the daily work of the departments at clinics • Demonstration of clinical skills • Participation in interventions in the field of internal medicine • Independently perform clinical skills • Consultation with mentors			
13.	**Total available time**		360 h	
14.	**Distribution of available time**		Classes will be organized during the 8 weeks working full time 8 hours. Tours They will be organized in the respective wards practiced internal medicine. Practice will take place in groups of 2-5 students to mentor and assistant s. During the tours will change the mentors departments. Everyday activities the student will be registered in the "diary of activities," which will be confirmed by the signature of the mentor.	
15.	**Forms of teaching / learning activities**	**15.1.**	**participation in clinic work under mentor's supervision**	8 hours/day
		15.2.	**consalting with mentor**	2 hours on each turn

<table>
<tr><td rowspan="3">16.</td><td rowspan="3">Other activities</td><td>16.1.</td><td>Project tasks</td><td></td></tr>
<tr><td>16.2.</td><td>Individual tasks</td><td></td></tr>
<tr><td>16.3.</td><td>Home learning</td><td></td></tr>
<tr><td>17.</td><td colspan="4">Method of assessment

Grading is descriptive (passed/not passed)

The teacher responsible for the professional practice keep a record of regular attendance and student activities during professional practice.

After completion of the Professional Practice student received a score but getting description-whether they passed or not passed successful professional practice.</td></tr>
<tr><td></td><td>17.1.</td><td colspan="2">Attending and taking active participation</td><td></td></tr>
<tr><td></td><td>17.2.</td><td colspan="2">Attending and taking active participation when consulatating with mentors</td><td></td></tr>
<tr><td></td><td>17.3.</td><td colspan="2">Term paper/project (presentation: writen and oral)</td><td></td></tr>
<tr><td>18.</td><td colspan="4">Assessment Criteria

Attending and taking active participation</td></tr>
<tr><td>19.</td><td colspan="2">Signature requirement and passing the final exam</td><td colspan="2">Attending and taking active participation, making term paper and/or oral presentation</td></tr>
<tr><td>20.</td><td colspan="2">Language of teaching / study</td><td colspan="2">English</td></tr>
<tr><td>21.</td><td colspan="2">Method of monitoringthe quality of teaching</td><td colspan="2">Self-evaluation</td></tr>
</table>

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				
		2.				
		3.				

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Surgery – clinical practice**			
2.	**Code**				
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	eleventh semester	**7.**	**Number of credits**	11
8.	**Professor (s)**	Prof. d-r Andreja Arsovski Acad. d-r Zivko Popovski			
9.	**Requirements for enrollment the Course**	enrolled sixth year			
10.	**Purposes of the curriculum (competencies):**Purpose of the active clinical practice in teaching departments and outpatient surgery is the future physicians to provide the knowledge gained during the study , a rational and systematic way to apply the benefit of early diagnosis of diseases , clinical syndromes and conditions , correct therapeutic approach ethical and professional attitude				

	towards patients , colleagues and associates . Anticipated outcomes of the case study : After completion of professional clinical practice , future physicians will be trained for the following knowledge , skills and attitudes : proper history - taking and clinical examination of the patient - identification and early detection of diseases , syndromes and clinical conditions of the patients , with an emphasis on emergency life-threatening situations application - and / or directing patients to appropriate certain diagnostic procedures (laboratory or clinical) to the correct interpretation of the results and setting the differential diagnosis - prescription and / or referral to appropriate therapeutic procedure or other more appropriate level of care - providing assistance in emergency situations and in the terminal stage of disease - treatment of chronically ill - responsible approach to their work in accordance with medical doctrine - respect of ethical and legal principles relevant to medical practice - participation in medical team, which is imperative in modern medical practice
11.	**Content of the course program:**

	1. Admiting clinic Individual taking history (surgical history) . Physical examination of systems , using basic methods (inspection , palpation , auscultation and percussion) and their systematic and rational use in the case ; 2. Aseptic hall Students become familiar with the work and behavior in aseptic room , its function (review of wound dressing , removal of suture material , minor surgical procedures (suture , excision , incision , extirpation) ; 3. Surgical ward Students become familiar with surgical ward, behaviors and basic methods for aseptic operations in the surgical room and ambulance . Running a painful surgery and its presentation to their colleagues and to participate in daily vision. 4. Surgical room Students become familiar with the principles of input, behavior and antiseptic operations room. Learning the basic positions of the Doctor (assistant) who participate in the surgical procedure . Active student participation in surgical procedures and familiarization with basic surgical principles of operation (incision , excision , mobilization , hemostasis and suture) ;
12.	**Learning methods:** Practical exersice on different surgical phantoms, simulations, working with patients under supervision. Each procedure the student must do at least 10 times in order to have confidence in performing the clinical skills.

13.	**Total available time**		330 h	
14.	**Distribution of available time**		4 weeks active clinical practice	
15.	**Forms of teaching / learning activities**	**15.1.**	**participation in clinic work under mentor's supervision**	8 hours/day
		15.2.	**consalting with mentor**	
16.	**Other activities**	**16.1.**	**Project tasks**	
		16.2.	**Individual tasks**	
		16.3.	**Home learning**	

17. Method of assessment

Grading is descriptive (passed/not passed)

The teacher responsible for the professional practice keep a record of regular attendance and student activities during professional practice.

After completion of the Professional Practice student received a score but getting description-whether they passed or not passed successful professional practice.

17.1.	**Attending and taking active participation**	
17.2.	**Attending and taking active participation when consulatating with mentors**	
17.3.	**Term paper/project (presentation: writen and oral)**	

18.	**Assessment Criteria** There are no formal grades 5-10	
19.	**Signature requirement and passing the final exam**	**There is no formal exam. There is a formal signature from person in charge that the clinical practice is successfully accomplished.**
20.	**Language of teaching / study**	**English**
21.	**Method of monitoring the quality of teaching**	**Methods based on particular Laws of RM and UGD Stip**

22. Literature

22.1. Required literature

No.	Author	Title	Publisher	Year
1	Prof. d-r Panovski	General Surgery	Makedonska Kniga	1978
2	Prof. d-r Gerzic, Milan Dragovic	General Surgery	Narodna biblioteka, Beograd	1998

Annex No.3	Program of the Course - first cycles tudies

1.	**Title of the Course**	**Gynecology and Obstetrics – clinical practice**			
2.	**Code**				
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	eleventh semester	**7.**	**Number of credits**	7
8.	**Professor (s)**	Prof. d-r Gligor Dimitrovski			
9.	**Requirements for enrollment the Course**	enrolled sixth year			
10.	**Purposes of the curriculum (competencies):**Purpose of the active clinical practice teaching in gynecological departments and clinics is the future physicians to provide the knowledge gained during the study , a rational and systematic way to apply the benefit of early diagnosis of diseases , clinical syndromes and conditions , the correct therapeutic approach ethical and professional attitude towards patients , colleagues and associates .				

	Anticipated outcomes of the case study : After completion of professional clinical practice , future physicians will be trained for the following knowledge , skills and attitudes : proper history - taking and clinical examination of the patient - identification and early detection of diseases , syndromes and clinical conditions of the patients , with an emphasis on emergency life-threatening situations application - and / or directing patients to appropriate certain diagnostic procedures (laboratory or clinical) to the correct interpretation of the results and setting the differential diagnosis - prescription and / or referral to appropriate therapeutic procedure or other more appropriate level of care - providing assistance in emergency situations and in the terminal stage of disease - treatment of chronically ill - responsible approach to their work in accordance with medical doctrine - respect of ethical and legal principles relevant to medical practice - participation in medical team, which is imperative in modern medical practice
11.	**Content of the course program:** 11. Admitting clinic Individual taking history (gynecological and obstetric history) . Exercise in

	terms of recognizing anatomy of the external genitalia . Perform a vaginal examination with a speculum and bimanual vaginal examination and rectal examination. 2.Colposkopic review Demonstrate taking and practically taking vaginal and cervical swabs for bacteriological examination, cytologic examination (Papanicolaou smear) and citohromal review. Demonstration of performance of colposkopic examination. Identification of normal and pathological colposcopic findings . 3.Ultrasound clinic Observation of ultrasonic examination of gynecological and obstetric patients , and interventions under ultrasound control . 4.Ambulatory interventions in gynecology and obstetrics , Day Hospital Make and preparation of patients for minor gynecological interventions . Preparation of a healthcare provider, preparation and introduction of instruments for minor (outpatient) gynecological interventions and abortion . Demonstration of taking tissue biopsies of external genital organs and cervix. Demonstration of exploratory curettage. Demonstration of preparing the patient for artificial termination of pregnancy and applying relevant statutory procedures in practice . Demonstration of dilatation of the cervical canal and instrumental evacuation of the contents of the uterine cavity . Perform cardiotocography and differentiating normal from pathological CTG record . Demonstration of performance oxytocin stress test and interpretation of the findings . Processing operational early (after caesarean section and episiotomy) . 5.Operative block Demonstration and processing of the operative wound. Presence in the operating theater, introduction to work in the operating room and observe the surgery (if possible, and assisting in surgery). Monitoring the performance of

	endoscopic procedures in gynecology (hysteroscopy , laparoscopy) . 6.Birth ward Taking obstetric history . Preparation of mother and opstetrician for Review . External examination of pregnant / given birth : review - inspection , palpation , auscultation , pelvic taking action. Internal examination of pregnant / or woman who gave birth . Establishing obstetric history and complete documentation of medical birth . Attendance and participation in the conduct of normal and pathological Birth : running time of first birth and review of childbed under dilation , leading to a second birth - time monitoring and understanding the mechanism of expulzion , protecting the puerperium , observation of vaginal obstetric operations , keeping the third was born during the extrusion - liner (Crede surgery) , review the placenta and membranes (performing under control assistant) , fourth birth - time monitoring of vital parameters of the mother by the students . Introduction to the care of the newborn immediately after birth (newborn care in the delivery room , Apgar - score , resuscitation of newborn , newborn proper documentation according to legislation) . Monitoring the preparation and execution of obstetric interventions . All states are taking the birth room . 7.Oddel the puerperium Review , monitor uterine involution and establishing lactation performing education on proper breastfeeding , breast examination , solving lactostasis , processing of episiotomy in the first days after delivery . Tracking the immediate postoperative course after caesarean section , processing of the operative wound.

12.	**Learning methods:** Practical exercises of various gynecological and obstetric phantoms, simulations, work with patients under supervision. Each procedure student should do at least 10 times to gain confidence in performing clinical skills.			
13.	**Total available time**		210 h	
14.	**Distribution of available time**		4 weeks active clinical practice	
15.	**Forms of teaching / learning activities**	**15.1.**	**participation in clinic work under mentor's supervision**	
		15.2.	**consalting with mentor**	
		15.3	**Clinical practice**	210 hours
16.	**Other activities**	**16.1.**	**Project tasks**	
		16.2.	**Individual tasks**	
		16.3.	**Home learning**	
17.	**Method of assessment**			
	17.1.	**Attending and taking active participation**		
	17.2.	**Attending and taking active participation when consulatating with mentors**		
	17.3.	**Term paper/project (presentation: writen and oral)**		

18.	**Assessment Criteria** There are no formal grades 5-10	
19.	**Signature requirement and passing the final exam**	**There is no formal exam. There is a formal signature from person in charge that the clinical practice is successfully accomplished.**
20.	**Language of teaching / study**	English
21.	**Method of monitoring the quality of teaching**	**Methods based on particular Laws of RM and UGD Stip**

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1	Prof. d-r Gligor Dimitrov, Ass d-r Andrijana Sterjovska-Aleksovska	Authors lectures		2013
		2	Mladenovic et al.	Gynecology and Obstetrics	Zavod za udzbenike, Beograd	2008
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Ristic Lj.	Practical Gynecology	Freemental, Beograd	2006
		2.	Ristic Lj.	Practical Obstetrics	Freemental,	2001Sh

					Beograd	irimbel
		3.	Sirimbel	Practical obstetrics	Medicinska Knjiga, Beograd-Zagreb	1985
		4	Miladinovic P.	Practicum of gynecology and obstetrics for students of medicine and residents	Medicinski fakultet, Nish	1995

Annex No.3	**Program of the Course - first cycle studies**				
1.	**Title of the Course**	**Pediatrics-clinical practice**			
2.	**Code**				
3.	**Study Program**	General medicine			
4.	**Organizer of the study program (unit orinstitute, Faculty, department)**	University Goce Delcev Faculty of medical sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	Twelfth	**7.**	**Number of credits**	7
8.	**Professor (s)**	Prof d-r Elizabeta Zisovska			
9.	**Requirements for enrollment the Course**	Confirmed eleventh and assigned twelfth semester			
10	**Purposes of the curriculum (competencies):**				
·	The purpose of this Clinical practical trainingacquiring the clinical skills with integration of the theoretical knowledge about the approach and addmission of the sick child, proper diagnostics and therapeutic approach providing evidence based medicine, practicing good communication skills with the patients and their paretns.guardians.				
11	**Content of the course program:**				**Hours**

.	Application of preventive measures for improvement of the child health	**5**
	Preventive measures against nosocomial infections Handwashing-for surgery and routine Ap[plication of measures for ensuring aseptic environment Control over nosocomial infections Dealing with outbreaks in pediatric departments	**10**
	Admission and approach to the child as a patient and its family (practicing communication skills)	**10**
	Getting history of the diseases, generatiin geneologic data, taking into account the specifics of pediatric poatient	**10**
	Pfysical examination on the admission of the newborn, infant, (pre)school child	**10**
	Integrative approach to the history and physical examination of each system • General appearance of the patient, severity of the disease • Measures: weight, height, circumferences, blood pressure • Growth and development assessment • Inspection of the skin, mucoisa, posture, movements • Palpation of the skin, lymphnodes, pulses • Examination of the chest (inspection, palpation, auscultation, percussion) • Examination of the abdomen (inspection, palpation, auskultation, percussion) • Examination of the genitalia (inspection and palpation) • Examination of the bone system (inspection, palpation,movements) • Gross neurological state (consiousness, orientation, tendon and primitive reflexes, cranial nerves function, motor assessment, tone, sensorium)	**10**
	Primary resuscitation and resuscitation of critically ill child-steps • Aspiration-free airways • Positive pressure ventilation and oxigenation • Cardiac massage-improving circulation • Maintaining homeostasis	**20**

	Nutrition • Nutrition of the healthy newborn child • Introduction to the breastfeeding techniques, problems and their solutions • Introduction of the Baby friendly hospital principles • Calculation of the nutritional needs in different ages of childhood • Nutrition of the ill child • Partial and total parenteral nutrition	**20**
	Recognition the signs of rickets Prophylaxius of rickets Treatment of the rickets	**5**
	Diagnostic procedures in pediatrics • Venepunction • Taking capilary blood • X-ray • Ultrasound examination • Electrocardiography • Dopler ultrasound • Holter monitoring • Blood pressure measures • Endiscopic procedures • Colonoscopy • Lumbal puncture • Ascites punction • Pleural punction • Lung functional tests • Bone marrow punction • Renal functional tests • Skin allergologic tests, test of elimination, test of exposition	**30**
	Therapeutic procedures in sick children • Resuscitation of the critically ill child • Birth resuscitaiton • Placement of venous canules • Insulin application • Intramuscular, intravenous and subcutaneous application of injection • Immunization • Preparation and checking the blood for transfusion • Checking and application of blood components	**40**

	• Placement of naso/orogastric tube • Placement of urinary catether • Umbilical residual part management • Phototherapy • Exanguinotransfusion • Breastfeeding conseling • Conselling for child education • Calculation of the nutritional needs of the children and type of feeding • Education of the parents and chronically ill patients (children) • Telling the truth to the parents (diagnosis and prognosis)	
	Pharmacotherapy, doses and formulations of the medicines for children • Assessment for appropriate dosage and formulation • Proper administration of the medicine • Avoidance of the adverse effects following administration	**10**
12.	**Learning methods:** -introductory lecture of the teacher and demonstration of the clinical skills -practical taking the history of the patient, geneology and physical examination -introductiob\n of the diagnostic procedures, interpretation of the results -estimation of the therapy -introduction of the evidence based Clinical guidelines -clinical skills demonstration -problem based learning, computer learning, -practical practice with the patient under the suprervision of skilled specialist pediatrician -consultations -writing a paper on an assigned topic,	
13.	**Total available time**	210 hours
14.	**Distribution of available time**	**4 weeks**
15	**Method of assessment-each activity is noted and assessed**	**Total 100 points**

.	15.1.	**Mandatory completed diagnostic procedures**	
	15.2.	**Mandatory completed therapeutic procedures**	
	15.3.	**Completed worked out patients (at least 10)**	
	15.4	**Practical final exam, work out of a case (patient)**	

16.	**Assessment Criteria (points /score)**	**up 50points**	**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)**
17.	**Signature requirement and passing the final exam**	Completed minimal number of diagnostic and therapeutic procedures and number of worked out patients	
18.	**Language of teaching / study**	English	
19.	**Method of monitoringthe quality of teaching**	Students' evaluation and Self-evaluation	

20.	**Literature**					
	20.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	Zitelli B.G and Davis	Atlas for pediatric	Tabernacul	2011

			H. V	physical diagnostics		
		2.	Mardesic D and all.	Pedijatrija, 6-th Ed.	Skolska knjiga, Zagreb	2003
	20.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				
		2.				
		3.				

Annex No.3	**Program of the Course - first cycle studies**				
1.	**Title of the Course**	**Ophtalmology – clinical practice**			
2.	**Code**				
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	twelfth semester	**7.**	**Number of credits**	4
8.	**Professor (s)**	Prof. d-r Milica Ivanovska			
9.	**Requirements for enrollment the Course**	enrolled sixth year			
10.	**Purposes of the curriculum (competencies):**To familiarize future doctors with basic procedures of diagnosis in ophthalmology and their treatment				
11.	**Content of the course program:** - Introduction to the history of the disease (local history and status of the eye)				

	- Examination of eye motility - Examination of the pupillary reflex - Test focal light on the outside of the eye and adnexa - Review of the anterior segment of the eye via biomicroscope - Methods for the Examination of lacrimal film - Washings of tear ducts - Measurement of intraocular pressure - Examination of iridokorneal angle (gonioskopy) - Review of slit lamp with magnifying glass on the front and rear segment - Ophthalmoscopy - direct, indirect scrutiny - Introduction to the special diagnostic methods: echography, angiography fluorescinska, perimeters, optical coherence tomography - Introduction to the basic concepts in treatment with laser photocoagulatio			
12.	**Learning methods:** Practical exercises through working with patients			
13.	**Total available time**		120 h	
14.	**Distribution of available time**		3 weeks active clinical practice	
15.	**Forms of teaching / learning activities**	**15.1.**	**participation in clinic work under mentor's supervision**	
		15.2.	**consalting with mentor**	
		15.3	**Clinical practice**	120 hours
16.	**Other activities**	**16.1.**	**Project tasks**	

		16.2.	**Individual tasks**	
		16.3.	**Home learning**	
17.	**Method of assessment**			
	17.1.	**Attending and taking active participation**		
	17.2.	**Attending and taking active participation when consulatating with mentors**		
	17.3.	**Term paper/project (presentation: writen and oral)**		
18.	**Assessment Criteria** There are no formal grades 5-10			
19.	**Signature requirement and passing the final exam**			
20.	**Language of teaching / study**	English		
21.	**Method of monitoringthe quality of teaching**	**Methods based on particular Laws of RM and UGD Stip**		

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1	**J.K.Kanski**	**Clinical Ophtalmology**		**2012**
		2	**S. Bradford**	**Basic concepts in**		**2008**

				ophthalmology		
		3	**S. Spalton**	**Atlas of ophthalmology**		**2010**
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	**K. Janev**	**General Ophtalmology**		**2012**
		2.				
		3.				
		4				

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Orthopedics and traumatology – clinical practice**			
2.	**Code**				
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	twelfth semester	**7.**	**Number of credits**	4
8.	**Professor (s)**	Prof. Gjorgi Zafiroski			
9.	**Requirements for enrollment the Course**	enrolled sixth year			
10.	**Purposes of the curriculum (competencies):**Purpose of the active clinical practice in teaching departments and outpatient surgery is the future physicians to provide the knowledge gained during the study , a rational and systematic way to apply the benefit of early diagnosis of diseases , clinical syndromes and conditions , correct therapeutic approach ethical and professional attitude				

	towards patients , colleagues and associates . Anticipated outcomes of the case study : After completion of professional clinical practice , future physicians will be trained for the following knowledge , skills and attitudes : proper history - taking and clinical examination of the patient - identification and early detection of diseases , syndromes and clinical conditions of the patients , with an emphasis on emergency life-threatening situations application - and / or directing patients to appropriate certain diagnostic procedures (laboratory or clinical) to the correct interpretation of the results and setting the differential diagnosis - prescription and / or referral to appropriate therapeutic procedure or other more appropriate level of care - providing assistance in emergency situations and in the terminal stage of disease - treatment of chronically ill - responsible approach to their work in accordance with medical doctrine - respect of ethical and legal principles relevant to medical practice - participation in medical team, which is imperative in modern medical practice

11.	**Content of the course program:** 1. Admitting clinic Individual taking history (orthopedic / traumatology) . Physical examination of systems , using basic methods (inspection , palpation , auscultation and percussion) and their systematic and rational use in the case ; 2. Immobilization room Students become familiar with the work and behavior at immobilization room and its application in (immobilization of distortion , closed reposition the fracture and immobilization) ; 3. Orthopedic / traumatology department Familiarizing students with orthopedic / trauma ward, behaviors and basic methods for aseptic operations in a hospital room and ambulance. Keeping orthopedic / traumatology patient and his presentation to their colleagues and to participate in daily morning rounds ; 4. Orthopedic / trauma OR Students become familiar with the principles of input, behavior and antiseptic operations room. Learning the basic positions of the Doctor (assistant) who participate in the surgical procedure . Active student participation in surgical procedures and familiarization with basic surgical principles of operation (open reposition of fracture, arthroplasty , arthroscopy) ;			
12.	**Learning methods:** Practical exercises on various orthopedic/trauma phantoms, simulations, work with patients under supervision. Each procedure student should do at least 10 times to gain confidence in performing clinical skills.			
13.	**Total available time**		120 h	
14.	**Distribution of available time**		4 weeks active clinical practice	
15.	**Forms of teaching /**	**15.1.**	**participation in clinic**	

	learning activities		**work under mentor's supervision**	
		15.2.	**consalting with mentor**	
		15.3	**Clinical practice**	120 hours
16.	**Other activities**	**16.1.**	**Project tasks**	
		16.2.	**Individual tasks**	
		16.3.	**Home learning**	

17.	**Method of assessment**		
	17.1.	**Attending and taking active participation**	
	17.2.	**Attending and taking active participation when consulatating with mentors**	
	17.3.	**Term paper/project (presentation: writen and oral)**	

18.	**Assessment Criteria** There are no formal grades 5-10	
19.	**Signature requirement and passing the final exam**	There is no formal exam. There is formal signature from the person in charge that clinical practice is successfully accomplished.
20.	**Language of teaching / study**	English
21.	**Method of monitoring the**	Methods based on particular Laws of RM

	quality of teaching	and UGD Stip

22.	**Literature**					
	22.1.	**Required literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1	Zafiroski G.	Children orthopaedics	Kultura	2003
		2	Adam Greenspan	Orthopaedic imaging	Lippincott	2004
		3				
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.	M.Tachdjian	Clinical pediatric orthopaedics	Appleton& Lange	1997
		2.				
		3.				
		4				

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Physical Medicine and Rehabilitation – clinical practice**			
2.	**Code**				
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	twelfth semester	**7.**	**Number of credits**	4
8.	**Professor (s)**	Prof. Zoran Handziski			
9.	**Requirements for enrollment the Course**	enrolled sixth year			
10.	**Purposes ofthe curriculum (competencies):**The purpose of this clinical practice teaching the subject Physical Medicine Rehabilitation in learning clinical skills by integrating theoretical knowledge of basic mechanisms and principles of physical medicine and rehabilitation, physiological effects, the basic methods of application and application of electrotherapy, heat, hydro and				

	balneotherapy as and basic principles for applying chiropractic funds for treatment and prevention of various diseases of different organs and systems. Students gain practical knowledge and skills for combining the physical factors, the rules for making physiotherapeutic programs depending on the diagnosis and overall functional status of the patient.
11.	Content ofthecourse program: Basic mechanisms and principles of physical therapy , optimization and combining the physical factors. 10h Types , physiological and therapeutic effects , indications and contraindications , methods of application , dosage . Working with Physiotherapy equipment and proper positioning of the patient when working with tools 10h Rehabilitation. Types and evaluation of rehabilitation potential. 10h Thermotherapy . Hydrotherapy and balneology . Physiological and therapeutic effects on different organs and systems , methods of application , dosage. 20h Electrotherapy . Types of flows, physiological and therapeutic effects , indications and contraindications , methods of application , dosage . Presentation and work with the available equipment , proper positioning of the patient when working with tools. 20h Magnetic therapy , ultrasound therapy , lasertherapy 20h. • Physical therapy and rehabilitation of patients with diseases of the respiratory system 20h • Physical therapy and rehabilitation of patients with cardiovascular disease 20h • Physical therapy and rehabilitation of patients with traumatology and orthopedic diseases 20h • Physical therapy and rehabilitation of patients with common degenerative and rheumatic diseases 20h

	• Physical therapy and rehabilitation of patients with common diseases of the CNS and PNS 20h • Chiropractic . Basic principles of motor and activity types, purposes and means of Chiropractice . The place of chiropractice in physical medicine and rehabilitation. Indications and contraindications for its use. 20h			
12.	**Learning methods:** - introduction lecture from the teacher and demonstration of clinical skills - hands-on history taking, physical diagnosis, determination of diagnosis -conducting diagnostic procedures, interpretation of results -develop a program for physical therapy - demonstration of physiotherapeutic skills -problem-based learning, self-study with computer -practical work with patients under the supervision of the responsible specialist - physiatrist -consultation -making short work of an individual professional issues in the field of physical medicine			
13.	**Total available time**		120 h	
14.	**Distribution of available time**		4 weeks active clinical practice	
15.	**Forms of teaching / learning activities**	**15.1.**	**participation in clinic work under mentor's supervision**	
		15.2.	**consalting with mentor**	

		15.3	**Clinical practice**	
16.	**Other activities**	**16.1.**	**Project tasks**	
		16.2.	**Individual tasks**	
		16.3.	**Home learning**	

17.	**Method of assessment**		
	17.1.	**Attending and taking active participation**	
	17.2.	**Attending and taking active participation when consulatating with mentors**	
	17.3.	**Term paper/project (presentation: writen and oral)**	

18.	**Assessment Criteria** There are no formal grades 5-10	
19.	**Signature requirement and passing the final exam**	There is no formal exam. There is formal signature from the person in charge that clinical practice is successfully accomplished.
20.	**Language of teaching / study**	English
21.	**Method of monitoring the quality of teaching**	Methods based on particular Laws of RM and UGD Stip

22.	**Literature**	
	22.1.	**Required literature**

		No.	Author	Title	Publisher	Year
		1	M.Tachdjian	Clinical pediatric orthopaedics	Appleton& Lange	1997
		2	Kolt S.G, Mackler L.S	Physical Therapies in Sports and Exercise	Churrchill Livingstone Elsevier Philadelphia	2003
		3				
	22.2.	**Additional literature**				
		No.	**Author**	**Title**	**Publisher**	**Year**
		1.				
		2.				
		3.				
		4				
		5				

Annex No.3		**Program of the Course - first cycle studies**			
1.	Title of the Course	**Neurology – clinical practice**			
2.	Code				
3.	Study Program	General Medicine			
4.	Organizer of the study program(unit orinstitute, Faculty, department)	Faculty of Medical Sciences University Goce Delcev, Stip			
5.	Cycle (first, second and third cycle)	Integrated studies first and second cycle			
6.	Academic year / semester	Twelfth	7.	Number of credits	4
8.	Professor (s)	Prof. d-r Anita Arsovska			
9.	Requirements for enrolment the Course	Passed exam in Neurology			
10.	**Objectives of the curriculum (competencies):** Introduction to the diagnostic and therapeutic procedures in the field of Neurology. • Enabling students-future doctors to implement the knowledge gained during the study, in clinical practice in a rational and systematic manner, in order to timely diagnose the disease or clinical syndrome and take proper therapeutic procedure, while keeping the professional attitude towards patients, colleagues and associates. • Upon completion of clinical practice, the future doctors will gain theoretical knowledge of Neurology refers to the patient admitted in a hospital ward, become aware of the specifics of taking the medical history at each department. They will learn the procedures for setting up a working diagnosis and treatment plan at the individual base. Upon completion of clinical practice, the future doctors will gain key skills for the clinical assessment and treatment. They will be able to independently make the patient admission at hospital, to perform blood tests and urine analysis, insert urinary catheter, basic cardiopulmonary resuscitation, interpret the results from EEG, brain CT, EMNG, EP, Lumbar puncture, muscle biopsy, insert medication via parenteral way (subcutaneously, intramuscularly, intravenously). • They will observe and possibly assist in interventions such: lumbar puncture,				

	insertion of nasogastric tube, insert urinary catheter.
11.	• **The content of the curriculum:** Professional practice covers the most important diagnostic and therapeutic principles and procedures in the field of Neurology. • Admissionof patient in hospital • Specifics of taking the medical history at the Neurology department • Creation of a diagnostic algorithm, a working diagnosis and treatment plan of individual clinical case • Analysis of the results of biochemical examinations of blood and urine,biochemical markers in blood / plasma • Mastering the art of injection application (subcutaneously, intramuscularly, intravenously) insertion of a urinary catheter • Interpretation of EEG, brain CT, EP, EMNG, lumbar puncture, muscle biopsy • Introduction to the craft of performance, attendance and participation in the interpretation of lumbar puncture, cardiopulmonary resuscitation, application of injections (intramuscular, intravenous, subcutaneous) • Monitoring and eventually assisting in interventions such as: lumbar puncture, placement of urinary catheter, insertion ofa gastric tube.
12	**Learning methods:** •Participation inmorning professionalmeetingsat the clinic

.	•Participation inmorningrounds in hospital words, •Participationin thedaily work ofthe departmentsatclinics •Demonstrationofclinicalskills •Participationininterventionsin the fieldofinternalmedicine •Independentlyperforming clinicalskills •Consultation withmentors			
13.	Totalavailablefund of time		120hoursofpractice	
14.	Allocation ofavailable time		Teachingwillbe organizedduring the8weeks tour,workingfull-time 8hours. Tourswillbe organizedin the wardsin which internal medicine is practiced. Practicewilltake placein groups of2-5students inmentoringsystem (with professorsand assistants as mentors). During thetours, students will changedepartmentsandmentors. Everydayactivitiesof the studentwillberegisteredin the"diary ofactivities,"whichwillbeconfirme d with thesignatureof the mentor.	
15.	**Forms of teaching** activities	15.1.	Participation in regularwork at the word, under or in the presence of the mentor	8 h per day
		15.2.	Consultation with mentor	2 h per turns
		15.3	Terms of Reference(paper work)	
16.	**Methods of assessment** The assessmentisdescriptive(passed /failed) The teacherresponsibleforthe professionalpracticekeep a record ofregular attendanceandstudentactivitiesduringprofessionalpractice. Aftercompletionof the Practice,student doesn't receive a score,butgettingdescription-whether he/shepassedornotpassedsuccessfullyclinicalpractice.			

	Responsibleteacherenters this into the student’s index.		
	16.1	Attendance to the practical lessons and active participation	
	16.2	Regular consultations with the mentors	
	16.3	Seminar (paper/project - presentation: written and/or oral) optional	
17.	Assessment Criteria	Attendance to the practical lessons and activity	
18.	RequirementforsignatureandobtainingappropriateECTScredits	The presence and activity of practical training and preparation and presentation of seminar topic	
19.	Language ofteaching / study	English	
20.	Method ofmonitoringthe quality of teaching	Self-evaluation	

21.	Literature					
	21.1.	Required literature				
		No.	Author	Title	Publisher	Year
		1.				
		2.				
	21.2.	Additional literature				
		No.	Author	Title	Publisher	Year
		1.	Arsovska A, Popovski A	Doppler sonography in vascular pathology	Borografika	2013

Annex No.3	Program of the Course - first cycle studies

1.	**Title of the Course**	**Psychiatry – clinical practice**			
2.	**Code**				
3.	**Study Program**	General Medicine			
4.	**Organizer of the study program (unit or institute, Faculty, department)**	University Goce Delcev Faculty of Medical Sciences			
5.	**Cycle (first, second and third cycle)**	Integrated studies first and second cycle			
6.	**Academic year / semester**	twelfth semester	**7.**	**Number of credits**	4
8.	**Professor (s)**	Doc d-r Kniginja Richter Prof. d-r Gunter Nikleski			
9.	**Requirements for enrollment the Course**	enrolled sixth year			
10.	**Purposes of the curriculum (competencies):** Introduction to diagnostic and therapeutic procedures in the field of psychiatry In clinical practice enabling students - future doctors the knowledge gained during the study , in a rational and systematic manner in order to implement the timely diagnosis of disease or clinical syndrome and unable to take proper				

	therapeutic procedure , whilst meet the professional attitude towards patients , colleagues and associates . After completion of future clinical practice doctors will gain theoretical knowledge in psychiatry concerning the reception of patients in hospitals, outpatient treatment conditions , treatment cents for social rehabilitatio, will know the specifics of taking a psychiatric history , and characteristics of the clinical examination. They will learn the procedures for setting up a working diagnosis and treatment plan of individual clinical cases. After completion of future clinical practice doctors will gain key skills for the modern clinical assessment and treatment . You will be able to independently make the admission of a patient with Insertion of correct diagnosis and appropriate differential diagnosis, and to recommend to further diagnostic examinations necessary for the diagnosis, as WTO : an analysis of laboratory findings , electroencephalography , lumbar puncture , computer tomography or magnetic resonance brain slightly . We will review and possibly assist interventions: lumbar puncture , positioning of electroencephalography electrodes , and the analysis of findings, neurophysiologic reviews as WTO evoked potentials , electromyography , electroneurography , review of the autonomic nervous system , polysomnography and transcranial magnetic stimulation.
11.	**Content of the course program:** Professional practice covers the most important diagnostic and therapeutic principles and procedures in the field of psychiatry.

	Admission of patients in hospitals and ambulatory conditions Peculiarity of history taking each section and review the clinical characteristics of the patient departments: affective diseases child psychiatry Psychosis and borderline diseases Gerontopsychiatry Department for acute admission Department of addiction (alcohol drugs) Psihosomatics Forensic psychiatry Creating a diagnostic algorithm, working diagnosis and treatment plan of individual clinical cases Analysis of the results of biochemical examinations of urine, blood and smear biochemical markers in blood / plasma, EEG, CR and MRT brain Mastering the art of self-placement of injections (subcutaneously, intramuscularly, intravenously) Insertion of an indication of work, art, or music therapy Study of news psychoeducation Acquiring basic knowledge for family therapy Acquiring basic knowledge for individual types of psychotherapy
12.	**Learning methods:**

	Participation in professional meetings clinic or ambulatory centers Share on morning rounds Participation in the daily work of the departments at clinics Demonstration of clinical skills Participation in interventions in the field of psychiatry Independently perform clinical skills Consultation with mentors			
13.	**Total available time**		120 h	
14.	**Distribution of available time**		Classes will be organized during the 8 weeks working full-time from 8 hours. Tours They will be organized in the respective wards practiced internal medicine. Practice will take place in groups of 2-5 students in general mentoring with professors and assistants. During the tours will change departments and mentors. Everyday activities the student will be registered in the "diary of activities," which will be confirmed by the signature of mentor.	
15.	**Forms of teaching / learning activities**	**15.1.**	**participation in clinic work under mentor's supervision**	8 hours/day

		15.2.	**consalting with mentor**	2 hours each turn
		15.3	**Clinical practice**	
16.	**Other activities**	**16.1.**	**Project tasks**	
		16.2.	**Individual tasks**	
		16.3.	**Home learning**	

17. Method of assessment

The assessment is descriptive (passed / failed)

The teacher responsible for the professional practice keep a record of regular attendance and student activities during professional practice.

After completion of the Professional Practice student received a score but getting description-whether they passed or not passed successful professional practice.

The information of committing professional practice responsible teacher enters the index of the student.

17.1.	**Attending and taking active participation**	
17.2.	**Attending and taking active participation when consulatating with mentors**	
17.3.	**Term paper/project (presentation: writen and oral)**	

18. Assessment Criteria

There are no formal grades 5-10

19.	**Signature requirement and**	**There is no formal exam. There is formal**

	passing the final exam	**signature from the person in charge that clinical practice is successfully accomplished.**
20.	**Language of teaching / study**	**English**
21.	**Method of monitoring the quality of teaching**	**Methods based on particular Laws of RM and UGD Stip**

22.	**Literature**					
		Required literature				
		No.	**Author**	**Title**	**Publisher**	**Year**
	22.1.	**1**	**T. Szasz**	**Psychiatry**	**Springer Verlag**	**2008**
		2				
		3				
	22.2.	**Additional literature**				