

1	Subject	MEDICAL CHEMISTRY			
2	Code	DMH101			
3	Study Program	Study Program of Integrated studies in dental medicine			
4	Organizing Institution (Unit, Institute, Chair, Department)	Department of Medical Chemistry, Faculty of Medicine			
5	Educational degree (first or second cycle)	Integrated study			
6	Study year/semester	1/1	7	Number of credits	3
8	Teacher	Teachers from Department of Medical Chemistry, Faculty of Medicine			
9	Preconditions	/			
10	Teaching goals: The student will gain knowledge about the chemical construction of biomolecules, the chemical and energy changes during their conversions. The knowledge gained will serve him/her for understanding of biochemical processes and mechanisms for metabolic control and pathobiochemical events in the human body.				
11	Brief content				
	Theoretical course				Class
	Structure of atoms and molecules				1
	Ionic, Covalent bonds, Intermolecular forces				1
	Solutions, Quantitative Composition of Compounds, Colligative properties, Weak and Strong electrolytes (dissociation). Theory of acids and bases, pH, Buffers, Equilibrium in water solutions				1
	Buffers				1
	Basic thermochemical laws				1
	Chemical kinetics, Rates of chemical reactions				1
	Oxido-Reduction				2
	Chemistry of carbon atom, Alkanes, Alkenes, Alkynes, Cycloalkynes				1
	Aromatic compounds and their derivatives, Phenol, Polyphenoles				1
	Ketones, Aldehydes, Carboxylic acids				1
	Heterocyclic compounds				2
	Total				15
	Practical lessons:				Class
	Basic physico-chemical procedures in chemical-biochemical laboratories				3
	Solutions and colligative properties of solutions				3
	pH of solutions				3
	Buffers				3
	Properties and nomenclature of organic compounds				3
Total				15	
12	Methods of studying: class room oriented lectures, interactive lectures, group work, practical training, seminar paper				
13	Total available time	90 classes			
14	Organization of the course	15 classes - theoretical course, 15- practical course, 60 classes - home individual learning and other activities			
15	Forms of	15.1.	Theoretical course		15 classes

	teaching activities	15.2.	Practical course, seminars			15 classes
16	Other forms of activities	16.1.	Project tasks			
		16.2.	Individual tasks			15 classes
		16.3.	Individual (home) learning			45 classes
17	Method of assessment	17.1.	Tests			
		17.2.	Active participation, seminar paper/project (oral/written presentation)			Attendance of theoretical lectures: 51%-60% 1 point 61%-85% 2 points 86%- 100% 3 points Practical : 20-25 points* * attendance + demonstrated knowledge (5 practic exercises: 2 points attendance + 3 points demonstrated knowledge)
		17.3.	Final (written) exam			43-72 points
18	Grading criteria (points / grade)	Up to 59 points			5 (five) (F)	
		from 60 to 67 points			6 (six) (E)	
		from 68 to 75 points			7 (seven) (D)	
		from 76 to 84 points			8 (eight) (C)	
		from 85 to 93 points			9 (nine) (B)	
		from 94 to 100 points			10 (ten) (A)	
19	Requirement for signature and taking the final exam	To get signature in index, the student is duty to obtain 20 points of practical lecture and minimum 1 point of theoretical attendance.				
20	Language of the course	English				
21	Method for evaluation of the quality of education	Anonymous student's evaluation of the subject, teachers and collaborators involved in the educational activities				
22	Literature					
	22.1.	Mandatory textbooks				
		No.	Author	Title	Publisher	Year
	1	Krstevska Marija, Alabakovska Sonja, Efremova Aaron Snezana, Labudovic Danica, Cekovska Svetlana	General and Organic Chemistry	Faculty of Medicine, Skopje	Skopje, 2014	

	22.2.	Additional literature				
		No.	Author	Title	Publisher	Year
		1	Alabakovska Sonja, Bogdanska Jasna, Bosilkova Gordana, Efremova Aaron Snezana, Krstevska Marija, Labudovic Danica, tosheska Trajkovska katerina, Cekovska Svetlana	Practicum of Chemistry and Biochemistry for students of Dental Medicine	Faculty of Medicine, Skopje	Skopje, 2012