

1.	Subject	<b>TRANSFUSION MEDICINE</b>			
2.	Code	MLD – 314			
3.	Study program:	Three-year professional studies of medical laboratory diagnostics			
4.	Conducted by	UKIM – Medical faculty Department of Transfusiology, Institute of Transfusion Medicine			
5.	Degree of education (first or second cycle)	First cycle			
6.	Academic year/semester	III/V-VI	7.	Credits	7
8.	Professor	Prof. d-r T. Makarovska Bojadzieva s.col. d-r E. Velkova			
9.	Prerequisite				
10.	Goals	Making the students able to perform basic work processes in a transfusion medicine (blood bank) institution which means taking blood and blood elements from blood donors, processing of blood units and getting blood products for clinical use, independent performance and interpretation of immunohematology and hemostasis laboratory tests.			
11.	Content summary:	<p><b>Theoretical lessons:</b></p> <p>Blood donation – general principles of volunteer blood donation, taking blood units and apheresis blood elements (thrombocytapheresis, stem cells)</p> <p>Blood processing: getting blood elements (erythrocytes, plasma, thrombocytes, cryoprecipitate) from blood units with manual or automatic procedure, labeling the blood elements, conditions and ways of storing</p> <p>Blood test – blood type and screening of markers of transfusion transmit infections (TTI)</p> <p>Blood distribution: special conditions for storing and transporting blood elements and derivatives, procedure and documentation linked to giving blood components.</p> <p>Immunohematology laboratory tests: special conditions for receiving blood samples, determining blood type (donors, pregnant women, newborns, patients) with manual and automatic techniques, screening of anti-erythrocyte antibodies and procedures for their identification, pre-transfusion testing and choosing compatible blood for different patient categories with special attention to newborns and sensitive patients</p> <p>Laboratory diagnosis of hemostasis: special conditions for receiving blood samples, principles of performing general hemostasis and fibrinolytic analyses, dosing separate factors, thrombocyte function assessment tests, determining INR</p> <p>Molecular laboratory diagnosis in transfusiology: tissue compatibility tests (HLA), thrombophilia tests and blood type tests.</p> <p><b>Practical lessons:</b></p> <p>Blood donation – registration and vein puncture of donor/patient and handling blood units and apheresis blood elements</p> <p>Blood elements: getting, labeling, storing, distributing and transporting.</p> <p>Blood test – pre-analytic (handling blood samples and their preparation for testing), determining blood type ABO and Rh system in blood donors, screening of anti-erythrocyte bodies, screening of markers of transfusion transmit infections</p> <p>Immunohematology - determining blood type ABO, Rh and other blood type systems in patients, pregnant women and newborns, pre-transfusion testing of patients, screening and identification of antibodies</p> <p>Coagulation – pre-analytics and handling blood samples, performing hemostasis tests, determining INR</p>			

	Molecular laboratory testing in transfusion medicine – blood type and HLA type, thrombophilia tests			
12.	Teaching methods: theoretical lessons and practical lessons with demonstration and practice			
13.	Total classes:	105		
14.	Organization			
15.	Types of teaching activities	15.1	Lessons: theoretical classes	30 Points: min.-max. 2 - 8
		15.2	Practical lessons	30 Points: min.-max. 12 - 16 The student can miss one practical lesson
16.	Other types of activities	16.1	Practice	30
		16.2	Seminars	15
		16.3	Learning at home	Filled practicum
17.	Knowledge assessment		Points	
	17.1	First mid-term exam: Test 1	Min. – Max. 15 – 28	
	17.2	Final exam: Test 2	Min. – Max. 19 – 32	
	17.3	Practice	Min. – Max. 12 – 16	
	17.4	Total points (theoretical lessons, practical lessons, practice and mid-term exams, tests)	Points                   Min. – Max. Theoretical lessons: 2 – 8 Practical lessons: 12 - 16 Practice: 12 - 16 Test 1: 15 - 28 Test 2: 19 - 32 Total: 60 - 100	
18.	Grading criterion (points/grades)	Up to 59	5 (five) F	
		60-68	6 (six) E	
		69-76	7 (seven) D	
		77-84	8 (eight) C	
		85-92	9 (nine) B	
		93-100	10 (ten) A	
19.	Requirements for obtaining a signature and attending the final examination	Finished theoretical and practical lessons and filled practicum		
20.	Language	Macedonian		
21.	Method of evaluating the quality of the lessons	Students' attendance and interactive participation in the theoretical and practical lessons		
22.	Literature:			
	22.1	Mandatory literature		

		1.	Prof. d-r M. Blagoevska, Research Associate T.Makarovska Bojadzieva. Medical Faculty – Skopje
		2.	Authorized lectures of the Department
		3.	Transfusion Medicine practicum: M. Blagoevska, T.Makarovska – Bojadzieva, E. Velkova, V. Dejanova Ilijevska. Medical Faculty Skopje
	22.2	Additional literature	