

CLINICAL COURSE V: TRANSFUSION MEDICINE	
GENERAL INFORMATIONS	
Course coordinator	Assoc. Prof. Marina Samardžija, MD, PhD
Assistant/Associate	Asst. Prof. Marina Ferenac Kiš, MBiolMol, PhD Asst. Prof. Irena Jukić, MD, PhD Asst. Prof. Saška Marczi, MEdBiol et Chem, PhD Branislava Kojić Latas, MD Dejana Brkić Barbarić, MD Maja Marijanović, MD Sandra Vitaić, MD
Study Programme	Undergraduate University Study of Medical Laboratory Diagnostics
Status of the course	mandatory
Year of study, semester	3rd year, 5th semester
ECTS credits	3
Form of instruction (hours)	Lectures: 5; Seminars: 5; Clinical exercises: 30
Expected number of students	30 - 35
COURSE DESCRIPTION	
Course objectives	
The acquisition of knowledge of carrying out optimal, rational and effective transfusion therapy, including knowledge of general principles on blood donation, laboratory selection of donors, blood changes during production, labeling and storage of blood products. Familiarizing students with the characteristics of blood products and plasma derivatives, indications for use and risks and side effects of transfusion therapy.	
Course requirements and required competences	
No additional requirements	
Learning outcomes relevant to the study program	
1.2, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2	
Learning outcomes at the course level	
After completing lectures, seminars and exercises, independent study and passing the exam, students will be able to: <ol style="list-style-type: none"> 1. interpret blood characteristics, types and traits of the various blood products. 2. apply good laboratory practice in transfusion medicine laboratories. 3. independently use laboratory information system when receiving and processing voluntary blood donor samples. 4. interpret the selection criteria of donors and basic principles of production, storage and issuing of blood and blood products. 5. independently work with blood products (taking, labeling, storing and issuing). 6. interpret clinical and laboratory aspects of bleeding disorders and their treatment. 7. assess the significance of pretransfusion testing. 8. discuss legal and economic aspects of transfusion medicine and compliance of the legislation of the Republic of Croatia with European laws. 	
Course content	
<p>Lectures: <i>Lecture 1: Blood donors – preconditions for safe transfusion therapy.</i> Criteria for selection of donors. Reception and categories of donors. Identification of donors and documentation management.</p> <p><i>Lecture 2: Blood products and plasma derivatives.</i> Basic principles of production, storage and issuing blood and blood products. Separating blood into components. Secondary production. Characteristics of blood products and plasma derivatives. Quality control of blood products. <i>Lecture 3: Fundamental transfusion therapy characteristics.</i> Indications, transfusion threshold and assessment of transfusion therapy success.</p>	

Seminars: S1: Bloodborne diseases: Pathogens. Characteristics of hepatitis B and C, HIV and syphilis pathogens. Clinical picture and epidemiology of the disease. Rare pathogens, prion diseases. Measures for preventing disease transmission.

S2: Inherited and acquired bleeding disorders. Hemophilia A and B. Von Willebrand disease. Acquired coagulation inhibitors. Disseminated intravascular coagulation. *Legal and economic aspects of transfusion medicine.* Paid donors. Medical confidentiality. Legislation of the Republic of Croatia and compliance with European laws.

Clinical exercises: Blood donors. Reception of blood donors. Positive identification. Completing the questionnaire. Laboratory and clinical screening. Documentation management. *Blood products.* Taking, labeling, storing and issuing blood products. Operating cell separators. *Risks of transfusion therapy.* Side effects of transfusion therapy. Side effect frequency. Factors and severity of side effects. Reporting and monitoring of side effects. Transfusion therapy control. *Ethics in transfusion medicine.* Fundamental ethical principles and the complexity of ethical principles in transfusion medicine.

Form of instruction

Lectures; seminars; exercises.

Student obligations

Attending all forms of instruction is mandatory, and the student must sit for all exams. A student can be excused from 30% of every form of instruction. Missed exercises must be compensated by sitting for an exam.

Monitoring student learning (Interconnectedness of learning outcomes, teaching methods and grading)

Type of exam: written exam.

Curricular activities	ECTS	Learning outcome	Student participation	Assessment methods	Points	
					Min.	Max.
Attendance (lectures)	0,5	1-8	Class attendance, Active participation in seminars; Completed exercise and an accepted report	Records	1	5
seminars		4			15	
exercises)		15			30	
Final exam	2	1-8	Preparation for the final exam	Written exam	30	50
Total	3				50	100

Valuation of the written part of the final exam

Percentage of correctly solved tasks (%)	Points
60.00-64.99	30
65.00-69.99	33
70.00-74.99	36
75.00-79.99	39
80.00-84.99	41
85.00-89.99	43
90.00-94.99	47
95.00-100	50

Formulation of the final grade:

Points achieved in class are combined with points achieved on the final exam. The grading shall be carried out by using absolute distribution, i.e. shall be based on the final achievement and compared to the numerical system as follows:

A – excellent (5): 90-100 points; B – very good (4): 80-89.99 points; C – good (3): 70-79.99 points; D – sufficient (2): 60-69.99 points.

Mandatory reading (available in the library or in other mediums)

Title	Number of copies in the library	Availability in other mediums
Balen S. Osnove transfuzijske medicine [Introduction to Transfusion Medicine]. Osijek: Medicinski fakultet Osijek; 2010	23	
Samardžija M. Krvlju prenosive bolesti [Bloodborne Diseases]. Medicinski fakultet Osijek; 2011	8	

Additional reading

1. Grgičević D., Vuk T. Imunohematologija i transfuzijska medicina [Immunohematology and Transfusion Medicine]. Zagreb: Medicinska naklada; 2000

Quality monitoring methods ensuring the acquisition of competences upon completion

An anonymous, quantitative, standardized student survey on the course and the work of professors conducted by the Quality Assurance Office of the Faculty of Medicine Osijek.