

Summary of the working program of the academic discipline

« BASICS OF TRANSPLANTOLOGY »

General Educational Program of higher education (specialist's degree programs)

31.05.01 General Medicine

Department: FACULTY OF SURGERY AND TRANSPLANTOLOGY

1. The purpose of mastering the discipline: participation in the formation of competencies - UC-1, UC-2, UC-3, UC-9, PC-1, PC-2, PC-4, PC-5, PC-6, PC-7, PC-8, PC-14

2. Position of the academic discipline in the structure of the General Educational Program (GEP).

2.1. The discipline refers to the core part of Block 1 of GEP HE

3. Deliverables of mastering the academic discipline and metrics of competence acquisition

Mastering the discipline aims at acquiring the following universal (UC) or/and general professional (GPC) or/and professional (PC) competencies

№	Competence code	The content of the competence (or its part)	Code and name of the competence acquisition metric	As a result of mastering the discipline, the students should:		
				know	be able to	possess
1.	UC-1	Able to carry out a critical analysis of problem situations based on a systematic approach, develop an action strategy	IUC 1.1 Knows: methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis IUC 1.2 Able to: gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to the professional field; search for information and solutions based on action, experiment and experience IUC 1.3 Has practical experience: researching the problem of professional activity using analysis, synthesis and other methods of intellectual activity; developing an action strategy to solve professional problems	methods of critical analysis and evaluation of modern scientific achievement s; basic principles of critical analysis	gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to the professional field; search for information and solutions based on action, experiment and experience	Has practical experience: researching the problem of professional activity using analysis, synthesis and other methods of intellectual activity; developing an action strategy to solve professional problems
2.	UC-2	Able to manage the project at all stages of its life cycle	IUC 2.1 Knows: methods of presenting and describing the results of project activities; methods, evaluation and evaluation of the results of the project;	methods for presenting and describing the results of project activities; methods,	prove practical and theoretical significance of the results obtained; check and analyze the	Has practical experience in: project management in the field relevant to professional activity;

			<p>consideration of the issue of forming a project within the framework of the problem under consideration; basic requirements for project work and evaluation criteria</p> <p>consideration of the project within the framework of the designated problem, formulation of the goal, objectives, relevance, perception (scientific, practical, methodological skills in drawing up plans and schedules for the implementation of the project as a whole plan and monitoring its implementation; qualities of a constructive overcoming speed rationale, methods and requirements for project work</p> <p>IUC 2.2 Able to: substantiate the practical and theoretical significance of the results obtained; check and analyze project documentation; predict the development of processes in the design professional area; put forward innovative ideas and non-standard approaches to their implementation in order to implement the project; calculate the qualitative and quantitative results, the timing of the project work</p> <p>IUC 2.3 Has practical experience in: project management in the field, consistent with her professional activities; distributing tasks and encouraging others to achieve goals; managing the development of the technical specifications of the project, managing the</p>	<p>criteria and parameters for evaluating the results of project implementation; principles, methods and requirements for the project work</p>	<p>design documentation; predict the development of processes in the project professional field; put forward innovative ideas and non-standard approaches to their implementation in order to implement the project; calculate qualitative and quantitative results, deadlines of project work execution</p>	<p>distribution of tasks and encouraging others to achieve goals; management development of technical specifications of the project, management implementation of profile project work; participation in the development technical specifications of the project and the project implementation program in the professional field</p>
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			<p>implementation of core design work. Has experience of participating in the development of project specifications and programs results of project activities.</p> <p>and others depending on the type of project), expected results and possible areas of their application; be able to see the image of the result of the activity and plan the follower!!</p> <p>number of steps to achieve this result;</p> <p>predict problem situations and risks in project activities.</p> <p>disagreements and conflicts.</p> <p>project implementation in the professional field</p>			
3.	UC-3	Able to organize and manage the work of the team, developing a team strategy to achieve the goal	<p>IUC 3.1 Knows: problems of selection of an effective team; basic conditions for effective teamwork; fundamentals of strategic human resource management, normative legal acts concerning the organization and implementation of professional activities; models of organizational behavior, factors in the formation of organizational relations, strategies and principles of teamwork, the main characteristics of the organizational climate and the interaction of people in the organization</p> <p>IUC 3.2 Able to: determine the management style for effective team work; develop a team strategy; apply the principles and methods of organizing team activities</p> <p>IUC 3.3 Has practical experience: participation in the</p>	the problems of selecting an effective team; basic conditions for effective teamwork; the basics of strategic human resource management, regulatory legal acts concerning the organization and implementation of professional activities; organizational behavior models, factors of formation of organizational relationships; strategies and principles of teamwork,	determine the management style for the effective team work; develop a team strategy; apply the principles and methods of organizing team activities	Has practical experience in: participation in the development of a team work strategy; participation in teamwork, role distribution in the team interaction

			development of a team work strategy; participation in team work, distribution of roles in the conditions of team interaction	the main characteristics of the organizational climate and interaction of people in the organization		
4.	UC-9	Able to use basic defectological knowledge in social and professional spheres	IUC 9.1 Knows: the basics of defectology IUC 9.2 Able to: establish effective communication and create a tolerant environment when working with people with disabilities and people with disabilities IUC 9.3 Имеет практический опыт: медико- социальной и организационной поддержки (сопровождения) лиц с ограниченными возможностями здоровья и инвалидов при получении ими медицинской помощи	the basics of defectology	the basics of defectology	Has practical experience in: medical, social and organizational support of people with disabilities when they receive medical care
5.	PC-1	Able to assess the condition of a patient requiring medical treatment in the emergency form	IPC 1.1 Knows: etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, course features, complications and outcomes of diseases of internal organs; methodology for collecting complaints and anamnesis; physical examination technique (examination, palpation, percussion, auscultation); a list of laboratory and instrumental research methods for assessing the condition, the main medical indications for conducting research and interpreting the results in patients requiring medical care in emergency forms IPC 1.2 Able to: identify clinical signs of conditions requiring emergency or emergency medical care	etiology, pathogenesis and pathomorphology, clinical aspect, differential diagnosis, clinical features, complications and outcomes of diseases of internal organs; methodology for collecting complaints and anamnesis; physical examination technique (examination, palpation, percussion, auscultation); a list of	identify clinical signs of conditions requiring medical treatment in the emergency form	assessment of the patient's condition requiring medical care in emergency or emergency forms

			IPC 1.3 has methods for assessing the condition of a patient requiring medical care in emergency or emergency forms	laboratory and instrumental research methods for assessing the condition, the main medical indications for conducting research and interpreting the results of patients requiring medical care in the emergency form		
6.	PC-2	Able to recognize conditions arising from sudden acute diseases, exacerbation of chronic diseases without obvious signs of a threat to the patient's life and requiring urgent medical care, recognize conditions that pose a threat to the patient's life including conditions of clinical death (stopping vital functions of the human body (blood circulation and/or respiration), requiring the provision of emergency medical care	IPC 2.1 Knows: etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, course features, complications and outcomes of diseases of internal organs; methodology for collecting complaints and anamnesis from patients (their legal representatives); method of physical examination of patients (examination, palpation, percussion, auscultation); a list of laboratory and instrumental research methods for assessing the patient's condition, the main medical indications for conducting research and interpreting the results: clinical signs of a sudden cessation of blood circulation and / or breathing IPC 2.2 Able to: identify clinical signs of conditions requiring emergency medical care; identify conditions requiring emergency medical care, including clinical signs of sudden cessation of blood	etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, features of the course, complications and outcomes of diseases of internal organs; methods of collecting complaints and anamnesis in patients (their legal representatives); methods of physical examination of patients (examination, palpation, percussion, auscultation); a list of methods of laboratory and instrumental investigation	identify clinical signs of conditions requiring emergency medical care; identify conditions requiring emergency medical care, including clinical signs of sudden cessation of blood circulation and respiration	provision of emergency medical care to patients with sudden acute diseases, conditions, exacerbation of chronic diseases without obvious signs of a threat to the patient's life; state recognition. posing a threat to the life of the patient, including conditions of clinical death (stopping the vital functions of the human body (blood circulation and / or respiration), requiring emergency medical care; providing emergency medical care to patients in conditions that pose a threat to the patient's life, including clinical death

			circulation and breathing	s to assess the patient's condition, the main medical indications for conducting research and interpreting the results; clinical signs of sudden cessation of blood circulation and/ or respiration		(stoppage of vital functions of the human body (blood circulation and/or respiration)
7.	PC-4	Able to use medicines and medical devices for providing medical care in emergency forms	IPC 4.1 Knows: basic cardiopulmonary resuscitation rules; principles of operation of devices for external electropulse therapy (defibrillation); rules for performing external electropulse therapy (defibrillation) in case of sudden cessation of blood circulation and / or respiration IPC 4.2 Able to: perform measures to provide medical care in urgent and emergency forms; basic cardiopulmonary resuscitation in combination with electrical impulse therapy (defibrillation)	modern methods of using medicines, medical devices for diseases and conditions in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) on the provision of medical care taking into account the standards of medical care in the provision of medical care in emergency or urgent forms; the mechanism of action of drugs, medical devices, medical indications and contraindications to their	prescribe medicines, medical devices taking into account the diagnosis, age and clinical picture of the disease in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) on the medical care delivery in emergency or urgent forms	provision of emergency medical care to patients in conditions that pose a threat to the patient's life, including clinical death (stopping vital functions of the human body (blood circulation and/or respiration)

				use; complications caused by their use; principles of operation of devices for external electric pulse therapy (defibrillation); rules for performing external electric pulse therapy (defibrillation) in case of sudden cessation of blood circulation and / or respiration		
8.	PC-5	Able to collect complaints, anamnesis of the patient's life and illness, conduct a complete physical examination of the patient (examination, palpation, percussion, auscultation), formulate a preliminary diagnosis and draw up a plan for laboratory and instrumental examinations of the patient	IPC 5.1 Knows: Legislation of the Russian Federation in the field of health care, regulatory legal acts and other documents that determine the activities of medical organizations and medical workers; method of collecting complaints, anamnesis of life and disease of the patient; a technique for a complete physical examination of the patient (examination, palpation, percussion, auscultation); etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, course features, complications and outcomes of diseases of internal organs; regularity and functioning of a healthy human body and mechanisms for ensuring health from the standpoint of the theory of functional systems; features of the regulation of the functional systems of	the legislation of the Russian Federation in the field of health care, regulations and other documents that determine the activities of medical organizations and healthcare workers; method of collecting complaints, anamnesis of life and disease of the patient; a technique for a complete physical examination of the patient (examination, palpation, percussion, auscultation); etiology, pathogenesis	collect complaints, anamnesis of life and disease of the patient and analyze the information received; conduct a complete physical examination of the patient (examination, palpation, percussion, auscultation) and interpret its results; determine the sequence of volume, content and sequence of diagnostic measures incl. modern digital technologies	collection of complaints, anamnesis of life and disease of the patient; a complete physical examination of the patient (examination, palpation, percussion, auscultation); formulating a preliminary diagnosis and drawing up a plan for laboratory and instrumental examinations of the patient

			<p>the human body in pathological processes; methods of laboratory and instrumental studies for assessing the state of health, medical indications for research, rules for interpreting their results</p> <p>IPC 5.2 Able to: collect complaints, anamnesis of life and disease of the patient and analyze the information received; conduct a complete physical examination of the patient (examination, palpation, percussion, auscultation) and interpret its results; determine the sequence of volume, content and sequence of diagnostic measures</p>	<p>and pathomorphology, clinical aspect, differential diagnosis, clinical features, complications and outcomes of diseases of internal organs; patterns of functioning of a healthy human body and mechanisms for ensuring health from the standpoint of the theory of functional systems; features of the regulation of the functional systems of the human body in pathological processes; methods of laboratory and instrumental examinations for assessing the state of health, medical indications for conducting investigations, rules for interpreting their results</p>		
9.	PC-6	Able to send a patient to laboratory, instrumental examination, to a	IPC 6.1 Knows: general issues of organizing medical care for the population, methods of laboratory and instrumental studies to	general issues of organizing medical care for the population,	justify the need and scope of laboratory examination of the	referral of a patient for laboratory examination if there is a medical

		<p>consultation with specialist doctors if there are medical indications in accordance with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on providing medical care taking into account the standards of medical care, and also refer the patient for providing specialized medical care in an inpatient setting or in a day hospital if there are medical indications in accordance with the current procedures for the medical care delivery, clinical recommendations (treatment protocols) on the medical care delivery taking into account the standards of medical care</p>	<p>assess the state of health, medical indications for conducting studies, rules for interpreting their results; procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, standards of medical care IPC 6.2 Able to: justify the need and scope of laboratory examination of the patient; justify the need and scope of instrumental examination of the patient; justify the need to refer the patient for consultations to specialist doctors; determine medical indications for the provision of an ambulance, including other specialized ambulance, medical care</p>	<p>methods of laboratory and instrumental examinations to assess the state of health, medical indications for conducting examinations , rules for interpreting their results; procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, standards of medical care</p>	<p>patient; justify the need and scope of instrumental examination of the patient; justify the need to refer the patient for consultations with specialist doctors; determine medical indications for the provision of emergency, including emergency specialized, medical care</p>	<p>indication in accordance with the current procedures for the provision of medical care, clinical guidelines and (treatment protocols) on the provision of medical care, taking into account the standards of medical care; referral of a patient for an instrumental examination if there are medical indications in accordance with the current procedures for the provision of medical care, clinical recommendations and (treatment protocols) on the provision of medical care, taking into account the standards of medical care; referral of a patient for a consultation with specialist doctors if there are medical indications in accordance with the current procedures for the provision of medical care, clinical guidelines and (treatment protocols) on the provision of medical care, taking into account the</p>
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10.	PC-7	Able to: make a differential diagnosis with other diseases/conditions including emergencies, establish a diagnosis taking into account the current international statistical classification of diseases and related health problems (ICD)	IPC 7.1 Knows: etiology, pathogenesis and pathomorphology, clinical picture, differential diagnosis, course features, complications and outcomes of diseases of internal organs; methods of laboratory and instrumental studies for assessing the state of health, medical indications for conducting studies, rules for interpreting their results; ICD IPC 7.2 Able to: analyze the results of the patient's examination, if necessary, justify and plan the amount of additional research; interpret the results of collecting information about the patient's disease; interpret the data obtained during the laboratory examination of the patient; interpret the data obtained during the instrumental	etiology, pathogenesis and pathomorphology, clinical aspect, differential diagnosis, clinical features, complications and outcomes of diseases of internal organs; methods of laboratory and instrumental examinations for assessing the state of health, medical indications for conducting examinations, rules for interpreting their results;	analyze the results of the patient's examination, if necessary, justify and plan the scope of additional examinations; interpret the results of collecting information about the patient's disease; interpret the data obtained during the laboratory examination of the patient; interpret the data obtained during the instrumental examination of the patient; interpret the	differential diagnosis with other diseases/conditions, including emergencies: diagnosis based on the current international statistical classification of diseases and related health problems (ICD)

			examination of the patient; interpret data obtained during consultations of the patient by medical specialists; to carry out differential diagnostics of diseases of internal organs from other diseases	ICD	data obtained during consultations of the patient by medical specialists; to carry out differential diagnostics of diseases of internal organs from other diseases	
11.	PC-8	Able to: develop a treatment plan for a disease or condition and prescribe medicine, medical devices, therapeutic nutrition and non-drug treatment taking into account the diagnosis, age and clinical picture in accordance with current procedures for the medical care delivery, clinical recommendations (treatment protocols) on the provision of medical care taking into account the standards of medical care and to evaluate the effectiveness and safety of the use of medicines, medical devices, therapeutic nutrition and other methods of treatment	IPC 8.1 Knows: modern methods of using medicines, medical devices and clinical nutrition for diseases and conditions in a patient in accordance with the current procedures for the provision of medical care, clinical recommendations and (treatment protocols) on the provision of medical care, taking into account the standards of medical care; mechanism of action of drugs medical products and medical nutrition, medical indications and contraindications to their use; complications caused by their use; modern methods of non-drug treatment of diseases and conditions in a patient in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care, taking into account the standards of medical care; mechanism of action of non-drug treatment; medical indications and contraindications to its appointment; side effects, complications caused by its use IPC 8.2 Able to: draw up a treatment plan for	modern methods of using medicines, medical devices and therapeutic nutrition in diseases and conditions of the patient in accordance with the current procedures for medical care, clinical recommendations (treatment protocols) on the provision of medical care taking into account the standards of medical care; the mechanism of action of medicines, medical devices and therapeutic nutrition, medical indications and contraindications to their use; complications caused by their use; modern	draw up a treatment plan for the disease and the patient's condition taking into account the diagnosis, the patient's age, the clinical picture of the disease in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care; prescribe medications, medical devices and therapeutic nutrition taking into account the diagnosis, age and clinical picture of the disease in	development of a treatment plan for a disease or condition, taking into account the diagnosis, age and clinical picture in accordance with the current procedures for the provision of medical care, clinical guidelines and (treatment protocols) on the provision of medical care, taking into account the standards of medical care: prescribing drugs, medical devices and clinical nutrition considering the diagnosis, age and clinical presentation of the disease and in accordance with the current procedures for the provision of medical care. clinical guidelines and (treatment protocols) on the provision of medical care,

			<p>the disease and the patient's condition, taking into account the diagnosis, the age of the patient, the clinical picture of the disease in accordance with the current procedures for the provision of medical care, clinical guidelines and (treatment protocols) on the provision of medical care, taking into account the standards of medical care; prescribe medicines, medical devices and therapeutic nutrition, taking into account the diagnosis, age and clinical picture of the disease in accordance with the current procedures for the provision of medical care clinical guidelines and (treatment protocols) on the provision of medical care, taking into account the standards of medical care; prescribe non-pharmacological treatment taking into account the diagnosis, age and clinical picture of the disease in accordance with the current procedures for the provision of medical care, clinical guidelines and (treatment protocols) on the provision of medical care, taking into account the standards of medical care; evaluate the effectiveness and safety of the use of medicines, medical devices and clinical nutrition</p>	<p>methods of non-drug treatment of diseases and conditions of the patient in accordance with current medical care procedures, clinical recommendations (treatment protocols) on the provision of medical care taking into account the standards of medical care; action mechanism of non-drug treatment; medical indications and contraindications to its prescription; side effects, complications caused by its use</p>	<p>accordance with the current medical care procedures, clinical recommendations (treatment protocols) on the provision of medical care taking into account the standards of medical care; prescribe non-drug treatment taking into account the diagnosis, age and clinical picture of the disease in accordance with the current medical care procedures, clinical recommendations (treatment protocols) on issues related to the provision of medical care taking into account the standards of medical care; evaluate the effectiveness and safety of the use of medicines, medical devices and therapeutic nutrition</p>	<p>taking into account the standards of care: prescribing non-drug treatment taking into account the diagnosis, age and clinical picture of the disease in accordance with the current procedures for the provision of medical care, clinical recommendations and (treatment protocols) on the provision of medical care, taking into account the standards of medical care; assessment of the effectiveness and safety of the use of medicines, medical devices, clinical nutrition and other methods of treatment</p>
12.	PC-14	Able to assess the effectiveness and safety of medical rehabilitation	IPC 14.1 Knows: Measures for the medical rehabilitation of the patient, medical indications and	measures for the medical rehabilitation of the patient,	monitor the implementation and evaluate the effectiveness	implementation of measures for the medical rehabilitation of the patient,

	measures of the patient in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) on the providing medical care taking into account the standards of medical care	contraindications for their implementation, taking into account the diagnosis in accordance with the current procedures for the provision of medical care, clinical recommendations and (treatment protocols) on the provision of medical care, taking into account the standards of medical care; medical indications and contraindications to the appointment of sanatorium-resort treatment as a stage of the patient's medical rehabilitation; features of medical rehabilitation of elderly and senile patients IPC 14.2 Can: monitor the implementation and evaluate the effectiveness and safety of rehabilitation measures, including the implementation of an individual rehabilitation or habilitation program for people with disabilities, taking into account the diagnosis in accordance with the current procedures for the provision of medical care, clinical guidelines and (treatment protocols) on the provision of medical care, taking into account the standards of medical care	medical indications and contraindications for their implementation taking into account the diagnosis in accordance with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care; medical indications and contraindications for sanatorium-spa treatment as a stage of medical rehabilitation of the patient; features of medical rehabilitation of elderly and senile patients	and safety of rehabilitation measures, including when implementing an individual rehabilitation program or habilitation of disabled people taking into account the diagnosis in accordance with the current procedures for medical care, clinical recommendations (treatment protocols) on the medical care delivery taking into account the standards of medical care	including the implementation of an individual rehabilitation or habilitation program for disabled people, in accordance with the current procedures for the provision of medical care, clinical recommendations and (treatment protocols) on the provision of medical care, taking into account the standards of medical care
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4. Volume of the academic discipline and types of academic work

Total labor intensity of the discipline is 1 CU (36 AH)

Type of educational work	Labor intensity		Labor intensity (AH) in semesters			
	volume in credit units (CU)	volume in academic hours (AH)	11			
Classroom work, including						
Lectures (L)	0,4	4	4			
Laboratory practicum (LP)*						
Practicals (P)	0,5	18	18			

Seminars (S)						
Student's individual work (SIW)	0,4	14	14			
Mid-term assessment						
credit/exam (<i>specify the type</i>)						
TOTAL LABOR INTENSITY	1	36	36			

5. Sections of the academic discipline and competencies that are formed

№	Competence code	Section name of the discipline
1.	UC- 1,2,3,9 GPC- 1,4,5,7 PC-1,2,4, 5,6,7,8,14	Introduction to the subject. History of transplantation. Legal framework and organization of transplant care. Organ donation.
2.	UC- 1,2,3,9 GPC- 1,4,5,7 PC-1,2,4, 5,6,7,8,14	Liver transplant. Kidney transplant. Basic concepts and schemes of immunosuppressive therapy.
3.	UC- 1,2,3,9 GPC- 1,4,5,7 PC-1,2,4, 5,6,7,8,14	Transplantation of the pancreas, heart, lungs. Cell technologies and perspectives of transplantation