

Документ подписан простой электронной подписью  
 Информация о владельце:  
 ФИО: Косенок Сергей Михайлович  
 Должность: ректор  
 Дата подписания: 18.07.2025 07:05:18  
 Уникальный программный ключ:  
 e3a68f3eaa1e62674b54f4998099d3d6bfdcf836

Khanty-Mansiysk Autonomous Okrug-Ugra  
 "Surgut State University"

Approved by

Deputy Rector for Academic Affairs

E.V. Konovalova

“11” June 2025, Record No. 5

# Anaesthesiology, Resuscitation, Intensive Care Syllabus

Department **Cardiology**

Curriculum s310501-ЛечДелоИН-25-6.plx  
 Specialty 31.05.01 General Medicine

Qualification **General Practitioner**

Form of education **Full-time**

Total (in credits) **3**

Total academic hours 108

including:

Contact 64

Self-study 44

Control:

Credit, 11<sup>th</sup> term

## Course outline in terms

Academic year (Term)	<b>6 (6.11)</b>		Total	
Weeks	17 2/6			
Types of classes	Cur	Syl	Cur	Syl
Lectures	16	16	16	16
Practical	48	48	48	48
Including interac.	8	8	8	8
Classes total	64	64	64	64
Classes	64	64	64	64
Self-study	44	44	44	44
Total	108	108	108	108

The Syllabus is compiled by:

*PhD in Medical Sciences, Associate Professor, Bailshev S.N.* \_\_\_\_\_

The Syllabus

### **Anesthesiology, Resuscitation, Intensive Care**

Developed in accordance with Federal State Educational Standard:

Federal State Educational Standard of higher education in the specialty 31.05.01 General medicine (Order of the Ministry of Education and Science of the Russian Federation on February 9, 2016 No.95)

Based on the curriculum:

31.05.01 GENERAL MEDICINE

Specialization: General Medicine

Approved by the Academic Council of Surgut State University, "11" June 2025, Record No. 5

The Syllabus was approved by the department

**Cardiology**

" \_\_\_\_\_ " \_\_\_\_\_ 20 \_\_\_\_\_, Record No. \_\_\_\_\_

Head of Department, PhD in Medical Sciences, Associate Professor Urvantseva I.A.

1. COURSE OBJECTIVES	
1.1	To give a system of ideas and knowledge about theoretical and practical issues of anesthesiology, intensive care of acute respiratory and cardiovascular insufficiency(failure), resuscitation and intensive care of shock states and acute disorders of consciousness, methods of resuscitation for terminal states, disorders of acid-base balance, disorders of fluid and electrolyte balance, basics of infusion therapy, resuscitation and intensive care for exo- and endotoxiosis.

2. COURSE OVERVIEW	
Course code (in curriculum)	B1.B
<b>2.1</b>	<b>Assumed background:</b>
2.1.1	Clinical pharmacology
2.1.2	Topographic anatomy, Operative surgery
2.1.3	Clinical laboratory diagnostics
2.1.4	Pathologic anatomy
2.1.5	General surgery, X-Ray diagnostics
2.1.6	Clinical pathophysiology
2.1.7	Pathologic syndromes in clinical medicine
2.1.8	Biochemistry
2.1.9	Anatomy
2.1.10	Hominal Physiology
2.1.11	Pharmacology
2.1.12	Pathophysiology
2.1.13	Internal Diseases Propedeutics
2.1.17	Clinical anatomy
<b>2.2</b>	<b>Post-requisite courses and practice</b>
2.2.1	Hospital therapy, Endocrinology
2.2.2	Hospital surgery, pediatric surgery
2.2.3	Emergency Medicine
2.2.4	Clinical Surgery

3. COMPETENCES UPON COMPLETION OF THE COURSE (MODULE)
GC-7: readiness to use first aid techniques, methods of protection in emergency situations
GPC-8: readiness for medical use of medicines and other substances and their combinations in solving professional tasks
GPC-9: ability to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems
PC-11: readiness to participate in the provision of emergency medical care for conditions requiring urgent medical intervention

**By the end of the course student must:**

<b>3.1</b>	<b>Know:</b>
3.1.1	- etiology, pathogenesis, modern classification, measures of prophylaxis of medical emergencies;
3.1.2	- diagnostic opportunities of methods of an immediate research of the patient, the modern methods of clinical, laboratory, tool inspection of patients (including endoscopic, radiological methods, ultrasonic diagnostics);
3.1.3	- features of first-aid treatment, at stages of anesthesia in peri-intra-and the postoperative period, protection methods in the conditions of emergency situations;

3.1.4	- clinico-pharmacological characteristics of basic groups of drugs and rational choice of medications for treatment of the main pathological syndromes of diseases and medical emergencies in patients;
3.1.5	- pharmacokinetics and pharmacodynamics, indications and contraindications of methods for the general and local anesthesia, medicines for a premedication, prophylaxis of complications in intra-and the postoperative period;
3.1.6	- the modern methods of clinical, laboratory, instrumental examination of patients (including endoscopic, radiological methods, ultrasonic diagnostics) and also diagnostic opportunities of methods of an immediate research of patients;
3.1.7	- diagnostic criteria, classification of severity of acute disorders of vital organs and systems;
3.1.8	- symptoms, features of a course and possible complications of the most widespread diseases proceeding in a typical form at various age groups;
3.1.9	- features of first-aid treatment and resuscitation of the victims of different types of acute disorders of vitals and systems;
<b>3.2 Be able to:</b>	
3.2.1	- obtain information on development and the course of a disease;
3.2.2	- identify risk factors of developing one or another disease, give recommendations for measures of prophylaxis of its emergence and progressing;
3.2.3	- estimate severity of a condition of the patient, define need, scope and the sequence of therapeutic measures, including resuscitation measures;
3.2.4	- define need and the sequence of use of drugs and their combinations;
3.2.5	- define need and the sequence of application of special research techniques (laboratory, radiological, endoscopic, functional), to interpret the obtained data;
3.2.6	- execute clinical diagnostics of the states demanding urgent medical intervention during general and local anesthesia, at different stages of anesthesia, in peri-intra-and postoperative period;

<b>4. STRUCTURE AND CONTENTS OF THE COURSE (MODULE)</b>						
<b>Class Code(in curriculum)</b>	<b>Topics /Class type</b>	<b>Term / Academic year</b>	<b>Academic hours</b>	<b>Competences</b>	<b>Literature</b>	<b>Notes</b>
	<b>Topics 1. Theoretical and practical questions of an anesthesiology</b>					
1.1	Theoretical and practical questions of an anesthesiology. /lecture/	11	2	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
1.2	Theoretical and practical questions of an anesthesiology. /practical classes/	11	4	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
1.3	Theoretical and practical questions of an anesthesiology. /self-study/	11	4	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
	<b>Topic 2. Intensive therapy of acute respiratory insufficiency</b>					
2.1	Intensive therapy of acute respiratory insufficiency /lecture/	11	2	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	

2.2	Resuscitation and intensive therapy of acute respiratory insufficiency due to pneumonia /practical classes/	11	4	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
2.3	Acute respiratory distress syndrome /self-study/	11	5	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
	<b>Topic3. Intensive therapy of acute heart and vascular failure</b>					
3.1	Intensive therapy of acute heart and vascular failure /lecture/	11	2	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
3.2	Resuscitation and intensive therapy of acute heart and vascular failure /practical classes/	11	6	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
3.3	Invasive and noninvasive monitoring of the central hemodynamics /self-study/	11	5	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
	<b>Topic4. Resuscitation and intensive care of shock states</b>					
4.1	Resuscitation and intensive care of shock states /lecture/	11	2	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
4.2	Traumatic shock - pathophysiology, diagnostics, the principles of an intensive therapy /practical classes/	11	4	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
4.3	Septic shock - pathophysiology, diagnostics, the principles of an intensive therapy /self-study/	11	4	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
	<b>Topic5. Resuscitation and intensive therapy of acute disorders of consciousness</b>					
5.1	Resuscitation and intensive care of acute disorders of consciousness /lecture/	11	2	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	

5.2	General questions of diagnostics, intensive therapy of acute disorders of consciousness. An intensive therapy of acute disorders of consciousness at a traumatic brain injury /practical classes/	11	6	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
5.3	Intensive therapy of acute disorders of consciousness at a stroke /self-study/	11	6	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
	<b>Topic 6. Methods of resuscitation in terminal states</b>					
6.1	Methods of resuscitation in terminal states /lecture/	11	2	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
6.2	Protocols of resuscitation measures at pre-hospital and hospital stages /practical classes/	11	6	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
6.3	Intensive therapy of post-resuscitation disease /self-study/	11	4	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
	<b>Topic 7. Disorders of acid-alkaline state and water-electrolyte metabolism</b>					
7.1	Pathophysiology of disorders of acid-base balance and disorders of fluid and electrolyte balance /lecture/	11	2	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
7.2	Types of disorders of acid-base balance. Methods of acute disorders treatment of fluid and electrolyte balance /practical classes/	11	4	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
7.3	Methods of acute disorders treatment of fluid and electrolyte balance /self-study/	11	4	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
	<b>Topic8. Basics of infusion therapy and parenteral nutrition</b>					

8.1	Characteristic of infusion solutions: crystalloids, colloids based of a dextran, hydroxyethyl starch and modified gelatine /practical classes/	11	4	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
8.2	Vascular access: catheterization of peripheral and central veins. /self-study/	11	6	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
	<b>Topic 9. Resuscitation and intensive therapy at exo - and endointoxications</b>					
9.1	Resuscitation and intensive therapy at exo - and endointoxications /lecture/	11	2	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
9.2	Diagnostics and intensive therapy of the most often found intoxications. /practical classes/	11	4	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
9.3	First aid at poisonings. Antidotal therapy. Characteristic of methods of detoxication /self-study/	11	2	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
	<b>Topic 10. Final class</b>					
10.1	Final class /practical classes/	11	6	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
10.2	Final class /self-study/	11	4	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	
10.3	<b>Credit</b>	11	0	GC-7 GPC-8 GPC-9 PC-11	L1.1 L1.2L2.1 L2.2 L2.3 L2.4 L2.5L3.1 L3.2 L3.3 L3.4 L3.5 E1 E2 E3 E4 E5 E6 E7 E8 E9	

5. ASSESSMENT TOOLS
5.1. Tools and tasks
Supplement 1
5.2. Assessment materials for diagnostic testing
Supplement 2

COURSE (MODULE) RESOURCES				
6.1 Recommended literature				
6.1.1. Core				
	Authors	Title	Publisher, year	Quantity
L1.1	Dolina O.A.	Anesthesiology and resuscitation	Moscow: GEOTAR-Media, 2009, electronic resource	1
L1.2	G. G. Zhdanov, A. P. Zilber	Resuscitation and intensive care [Text] : textbook for students	Moscow: Academy, 2007	16
6.1.2. Supplementary				
	Authors	Title	Publisher, year	Quantity
L2.1	Sumin S. A.	Emergency conditions: recommended by the Educational and Methodological Association for Medical and Pharmaceutical Education of Higher Education Institutions of Russia as a textbook for students of medical universities	Moscow: Medical Information Agency, 2013.	5
L2.2	Martov V.Yu.	Medicines in anesthesiology: a manual.	Moscow: Medical literature, 2013, electronic resource	1
L2.3	V. A. Koryachkin, V. L. Emanuel, V. I. Strashnov	Anaesthesiology, reanimation, intensive therapy. Clinico-laboratory diagnostics	Moscow: Urait Publishing House, 2018, electronic resource	1
L2.4	B.N. Bogomolov [and others].	Practicum for novice anesthesiologists [Electronic resource].	Saint Petersburg: Foliant, 2011, electronic resource	1
L2.5	. K.G. Shapovalov [et al]	Regional anesthesia [Electronic resource]: textbook	Chita: Chita State Medical Academy, 2010, electronic resource	1
6.1.3. Study manuals				
	Authors	Title	Publisher, year	Quantity
L3.1	L. D. Belotserkovtseva	Clinical protocols for anaesthesiology, intensive care, resuscitation and transfusiology in obstetrics	Surgut: Publishing center SURGU, electronic resource	1
L3.2	Bubovich E.V., Panfilov S.V., Oskin A.N.	Pathogenetic approaches to correction of a hypovolemia at critical states: manual.	Surgut: Publishing center SURGU, 2013 electronic resource	1
L3.3	Darvin V.V.	Practical skills in surgery [Electronic resource]: teaching manual	Surgut: Publishing center SURGU, 2013, electronic resource	1
L3.4	L. L. Zavertailo and others.	Modern principles of anesthesiological support for hip replacement operations [Electronic resource]: a training manual	Surgut: Publishing center SURGU, 2014, electronic resource	1
L3.5	L. L. Zavertailo and others.	Modern principles of intensive therapy for myocardial infarction [Electronic resource]: training manual	Surgut: Publishing center SURGU, 2016, electronic resource	1
6.2. Internet resources				



E1	The All-Russia Public Organization «Federation of Anaesthesiologists and Reanimatologists»
E2	Electronic library of SurSU
E3	Medical and Biological Publications Database of the National Center for Biotechnology Information, USA
E4	Uright's educational platform
E5	Znanium.com electronic library system
E6	IPR BOOKS electronic library system
E7	Lan` electronic library system
E8	Studmedlib electronic library system
E9	Scientific electronic library eLIBRARY
<b>6.3.1 Software</b>	
6.3.1.1	Applied programs pack Microsoft Office
6.3.1.2	Operational system Microsoft
<b>6.3.2 Information Referral systems</b>	
6.3.2.1	<a href="http://www.garant.ru">http://www.garant.ru</a> Legal information portal Garant.ru
6.3.2.2	<a href="http://www.consultant.ru/">http://www.consultant.ru/</a> Legal Reference System Consultant Plus

<b>7. MATERIAL AND TECHNICAL SUPPORT OF DISCIPLINE (MODULE)</b>	
7.1	The classroom for conducting lectures and classes, group and individual consultations, ongoing monitoring and midterm assessment is equipped with: a set of specialized educational furniture, a marker (chalk) board, a set of portable multimedia equipment - a computer, a projector, a projection screen, computers with Internet access and access to an electronic information and educational environment. Access to the Internet and to the electronic information environment of the organization is provided.