

SYLLABUS GENERAL MEDICINE

№	Subject	Hours total	Weeks total	Test	Exam.
1.	Philosophy	204	37	3	4
2.	History of Medicine	27	19	1	
3.	Science of Law	48	17	10	
4.	Psychology	143	37	3,4	
5.	Physical Training, Exercise Therapy	390	91	4,12	
6.	Foreign Language (Russian)	632	129	2,6	4,7
7.	Latin and Medical Terms	111	37	2	
8.	Medical Biology, Genetics, Parasitology	223	37	-	2
9.	Medical and Biological Physics, Mathematics and Informatics	305	37	1	2
10.	General Chemistry, Inorganic Chemistry and Organic Chemistry	305	37	-	1,2
11.	Biological Chemistry	278	37		4
12.	Human Anatomy	420	56		3
13.	Histology, Embriology and Cytology	288	37	-	3
14.	Normal Physiology	360	37		4
15.	Microbiology, Virology, Immunology	276	37		5
16.	Pharmacology	244	36		6
17.	Clinical Pharmacology	77	17	10	
18.	Pathological Anatomy and Sectional Course	275	57	-	6
19.	Pathological Physiology	244	36		6
20.	Medical Informatics	63	19	5	
21.	General Hygiene and Ecology	187	36		7
22.	Social Medicine, Economics and Public Health Organization	215	53	12	9
23.	Epidemiology	76	36	9	-
24.	THERAPY				
	- Nursing	56	18	4	-
	- Propedeutics of Internal Diseases	324	36	-	6
	- Internal Diseases and Physiotherapy	974	110	-	8,10
	- Endocrinology	76	17	8	-
	- Phthisiopulmonology	127	19	9	-
	- Occupational Diseases	57	19	9	-
	- Polyclinic Therapy	202	17	12	-
25.	SURGERY				
	- Nursing	56	18	4	-
	- General Surgery	244	36	-	6
	- Resuscitation with Intensive Therapy	77	19	9	
	- Operative Surgery	188	36	-	7
	- Special Surgical Diseases	655	94	11	8,10
	- Urology	57	19	7	-
	- Stomatology	57	17	8	-
	- Traumatology and Orthopedics	204	36	-	10
	- Oncology	102	17	10	-
26.	Obstetrics and Gynecology	589	110	-	8
27.	Pediatrics and Pediatric Infections	445	74	-	9
28.	Radial Therapy and Radial Diagnostics	108	36	7	-
29.	Infectious and Tropical Disease	480	74	-	10
30.	Skin and Venereal Diseases	142	36	-	8
31.	Neurology and Neurosurgery	187	36	-	8
32.	Medical Genetics	57	17	6	-
33.	Psychiatry and Narcology	134	36	-	10
34.	Otorhinolaryngology	114	17	-	8
35.	Eye Diseases	144	17	-	8
36.	Forensic Medicine	126	21	11	-

PRACTICAL TRAINING MEDICAL FACULTY

		TERM	WEEKS
1.	Nursing Practice	4	4
2.	Medical Assistant Practice	6	4
3.	Medical Practice	8	6
4.	Medical Practice	10	4

SYLLABUS – GENERAL MEDICINE (in details)

THE HISTORY OF MEDICINE

COURSE I

TERM 1

LECTURES 9

SEMINARS 10

Subjects and problems of medical history. Medicine of the prehistoric period. First medical habits. Medicine of the Ancient period (China, India, Egypt, Greece, Roman Empire). Development of the medicine in the Middle Ages and the Epoch of Renaissance (Western Europe, Arab East, Ancient Russia). Fighting with the epidemic diseases. Universities and training of medical skill. Scolasticism and cognition of diseases.	4	2
Development of Medicine in the 8th century. Appearance of clinical method and observance of the diseases. Peter I and his medical reforms in Russia. Development of the medicine in the 19th, the beginning of the 20th century. Discoveries in natural sciences and their influence on medicine. Differentiation and development of medical disciplines and sciences. Physician's role in society.	2	4
Foreign medicine and development of Russian medicine in the 20th century. The theory of "Civilization diseases". Native medical care in the 2nd World War, a international activity of the World Health organization. Influence of social factor on Public Health. Problems of medical ethics in modern doctor's activity.	3	4

SCIENCE OF LAW

COURSE V

TERM 10

LECTURES 14

SEMINARS 26

CREDIT TEST TERM 10

Science of law as a subject of study: problems, aims, matter. Knowledge of law is an integral part of professional activity of medical personnel.	2	-
Theory of state: notion of state, forms, historical types, functions. Theory of law: notion of law, its essence, system of law and its structure. Interconnection of law and morals, law and economy, law and policy. Objects and subjects of law, contents of relations of law. Forms of realizations of law norms. Public legality, law and order.	4	6
International law, its subject and principles. Charter of human rights: Universal Declaration of Human Rights (1948, UNO, item 25). CIS convention of rights and main liberties of a person (item 15).	2	6
Branches of law: public law, administrative law, civil, criminal, domestic law and labor law. The sources of law: laws and regulations. Application of various branches of law in medical professional activity.	2	4
Marriage and domestic law («Family code», «Marriage and domestic Code»). Legislation of nature and resources protection.	2	4
Criminal law: notion of crime, aims and types of punishment. Forced measures of medical character in the sphere of international public health and Russian public health.	2	6

PSYCHOLOGICAL & PRINCIPLES OF DOCTOR'S ACTIVITY

COURSE II

TERM 3,4

LECTURES 44

PRACTICAL CLASSES 48

CREDIT TEST TERM 3,4

Introduction into Psychology. Psychological aspects of Medicine. Methods of investigation in psychology. Biological basis of psychology. Psychic and brain of a man. Psychic phenomenon and brainwork correlation. Genotype background of psychology. Genotype and environment relationship. Development of psychics and a man's conscience. Types of behaviour and psychics in evolution process.	6	6
Psychodiagnosics. Scientific and practical psychodiagnosics. Psychometrical principles of psychodiagnosics.	2	4
Psychic activity manifestations. Psychic processes. Sensation and perception. Importance of sensations in a man's life. Notion and perception, their difference.	10	14
Types of notion. Memory and its types. Memory theories and laws. Attention. Functions and types of attention. Attention development. Basic function and types of emotions. Emotions and personality. Will, its basic signs. Motives of will actions. Thinking and speech. Peculiarities of creative thinking. Intellect. Speech and its functions. Speech as a means of communication and an instrument of thinking. Methods of intellect investigation.	10	8
Personality psychology. Modern theories. Individual psychological peculiarities of a person. Needs, their types. World outlook and persuasion. Temperament, its relationship with main types of personality. Personality and character. Psychology of activity. Activity motivation. Skills habits and customs.	2	2
Age peculiarities of psychic. Age periods in childhood and adolescence. Age development of interpersonal relations.	6	6
Psychological adaptation. Psychological lesadaptation. Basis of psycho-hygiene, psycho-prophylaxis and psychotherapy.	4	4
Communication. Interpersonal relations. Essence of collective body as social entity. Collective body and person development. Family and upbringing.	4	4
Psychology of a sick person. Autoplastic picture of disease. Fear for treatment and pain. Ethics and medical deontology.	4	4

MEDICAL TERMINOLOGY (LATIN LANGUAGE)

COURSE I

TERM 1-2

LECTURES 0

PRACTICAL CLASSES 74

CREDIT TEST TERM 2

Latin alphabet, phonetics.	4	-
A noun, general information about declinations. The nouns of the IH-d declination of singular and plural, of masculine, feminine and neuter genders.	12	-
Adjective, the group of adjective principles of sequences with the nouns. Comparative and superlative degrees.	10	-

A verb, its conjugation.		8
Aphorisms, sayings and dicta in Latin.		4
Pharmaceutical division. Prescription, its structure, the rules of filling in, prepositions in prescriptions. Chemical nomenclature in Latin.		16
"Clinical" division. Clinical terminology, ways of word-building, suffixation and prefixation. Greek-Latin designations of systems and organs of the organism. Designation of the number and quantity in Latin.		20

**BIOLOGY
COURSE I
TERM 1-2
LECTURES 56
PRACTICAL CLASSES 93
EXAMINATION TERM 2**

Biology, man, medicine. The role of Biology in medical education. Modern researches in Biology and Medicine. Human organism and environment, their interaction. Biosphere. Vernadsky's theory. Noosphere - the highest form of biosphere, hypothesis of origin of life on the Earth.	8	-
Irritability, anabiosis. Hypothermia. Cellular theory.	6	5
Parasitism as an example of biological relations. Unicellular parasites. Basic concepts of Helminthology. Natural foci of transmissible diseases. Arthropoda. Insects, their significance as carriers of human diseases.	3	35
Reproduction. Ontogenesis. Forms of reproduction. Peculiarities of human reproduction. Embryogeny. Ontogenesis. Molecular genetics, cellular. System reasons of ageing. Problems of regeneration in biology and medicine. Transplantation of organs and tissues.	8	5
Homeostasis. Mechanisms forming its basis. Biological rhythms, their medical significance. Clinical and biological death.	6	-
Genetics. Its significance in medicine. The laws of heritability. Adhesion of genes. Genetic maps of chromosomes. Interaction of allelic genes. Penetration and expressivity. Molecular structure of gene. Genetic code. Genetic engineering. Variability, chromosome mutation. Chromosome and molecular diseases. Methods of investigation of human heritability.	12	25
Theory of evolution (Ch. Darwin). The role of evolutionary factors in creation and consolidation of genetic structure of populations. Macroevolution. The adaptive character of evolutionary process. Anthropogenesis. Evolution of chordate and its regularity.	10	23

MEDICAL PHYSICS WITH BIOPHYSICS, MATHEMATICAL STATISTICS and INFORMATICS

**COURSE I TERM 1-2
LECTURES 70
PRACTICAL TRAINING 134
CREDIT TEST TERM 1
EXAMINATION TERM 2**

Electrical, magnetic, electromagnetic (EM) fields and electrical currents in medicine. Principles of generating and amplifying of EM fields and electrical currents. Ultra-high frequency fields and microwave fields in medicine. The electrical resistance of human tissues and its dependence on the frequency of electrical current. Rheography. The electronic oscilloscopes in medicine. Methods of electronic thermometry. Biophysical principles of electrocardiography (ECG) and electroencephalography (EEG).	11	32
Medical Optics Refractometry, light optofibers (laws of reflection and refraction), endoscopes, endoscopy. Methods of polarimetry in medicine, polarized light, polarizers, polariscope, sacchrimeter. Biomicroscopy, the special methods of biomicroscopy (darkfield microscopy, phase-contrast microscopy, ultraviolet microscopy, polarized light microscopy). Electron microscopy. Photometry.	9	27
The mechanics of fluids and gases. Acoustics. The ideal fluid (laws of flowing fluid). Viscosity, laws of flowing viscous fluids, clinical viscosimetry, viscosimeter. The fluid mechanics of blood. The superficial stretch of fluids. Energy, Power and Intensity of sound waves. Human hearing. Audiometry. Ultrasound in medicine. Effect of ultrasonics on biological tissues.	9	24
The biophysical principles of bioelectrical potentials forming. The kinds of ion diffusion through the plasma membranes. Mechanisms of passive and active transport through the biological membranes. Donnan potential. Diffusion potential. Generated potential. The movement of the nervous impulse along nerve fibers.	5	-
Ionized and non-ionized radiation in medicine and in environment. Effect of ionized and non-ionized radiation on biological tissues. Dose, biological dose, absorbed dose, maximum tolerance and low dose. Dosimetry, radiation meters. X-rays. X-rays sources. The spectrums of X-radiation. Basic principles of traditional roentgenoscopy, roentgenology, computer tomography (CT) and magnetic resonance method (MR) in medicine. Lasers in medicine. The particularity of lasers radiation. Coherent and incoherent low-power visible and infrared light.	6	8
The information resources of Internet. Modern Hardware and Software. The particularities of local and global computer nets. E-mail, teleconferences (usenet) WWW hypertext systems. The resources of Mednet, the special medical computer net of Russia Mednet.	12	27
Medical statistics. Use of differential and integral methods in biophysics. The theory of probabilities, introduction, confidence limits. Distribution fitting (Normal, Student's). Summary Statistics (average, median, variance Std. deviation, Std. error), Frequency tabulation, Histogram. Nonparametric methods. Correlation's. Regression analysis (simple regression).	18	16

GENERAL CHEMISTRY AND BIOORGANIC CHEMISTRY

**COURSE I
TERM 1-2
LECTURES 74
LABORATORY CLASSES 111
EXAMINATION TERM 1, 2**

Present notions of atom structure simple and complex molecules	4	-
The structure of complex compounds.	2	-
Chemical and physicochemical methods of analysis of chemical compounds.	-	12
The elements of chemical thermodynamics and bioenergetics.	4	4
Kinetics of chemical and biochemical reactions. Chemical balance.	2	5
Colligative properties of the electrolyte and non-electrolyte solutions.	4	6
Theories of acids and bases. Acid base balance.	2	3

Buffer solutions and systems of the organism.	2	3
Colloid solutions. Surface phenomena.	2	6
The theory of origin of electrode, oxidation reduction and membrane potentials. Electrochemical methods of investigations.	6	6
Heterogeneous, ligand redox balance with biogenic elements, chemistry of biogenic elements.	6	12
Electronic structure and reactive capability of organic compounds. The mechanisms of reactions. Hydrocarbons.	6	12
Acid base properties of organic compounds. Monofunctional organic compounds. Spirit, phenol, thiol.	4	3
Carbonyl compounds. Organic acids. Saponificated lipids.	8	9
Heterofunctional organic compounds. Stereoisomerism.	2	3
Carbohydrates. Monosacharide, di-, poly- heterosacharide.	4	6
Amino-derivatives. Amines. Amino-acids. Peptides. Proteins.	6	6
Biologically active heterocycles	4	6
Nucleic bases. Nucleic acids.	4	6
Non-saponificated lipids.	2	-

BIOCHEMISTRY

COURSE II

TERM 3,4

LECTURES 74

PRACTICAL CLASSES 111

EXAMINATION TERM 4

Subject and problems of biochemistry. Biochemistry and medicine. Structure and function of albumen. Steps of structure organization.	4	12
Enzymes. Classification and nomenclature. Peculiarity of enzymic catalysis Activity regulation. Diagnostic importance. Isoenzymes.	8	15
Biosynthesis of nucleic acids and albumen. Steps of process. Regulation. Influence of antibiotics.	4	6
Introduction of metabolism. Energy metabolism. Main manner of catabolism. Citric acid cycle. Oxidation decarboxilation of purivate. Mitochondium chain of electrons transfer. Oxidation phosphorylation.	8	12
Metabolism regulation. Hormones. Classification. Mechanisms of hormonal signal transmission.	4	3
Exchange and functions of carbo-hidrates. Main tissues and food carbo-hydrates. Age characteristic of carbo-hydrated digestional and absorbational processes. Glucose biosynthesis. Synthesis and disintegration of glucogene. Pentazophosphate way.	8	21
Exchange and functions of lipids. Main lipids of the organism. Blood plasma, lipo-proteins, fatty acid exchange: oxidation, biosynthesis. Ketonic bodies. Neutrat fat and cholesterine biosynthesis. Structure and functions of cell membranes. Peroxide lipid oxidation. Antioxidants.	10	12
Exchange and functions of aminos. Transamination. Role of glutamic acid/ Decarbo-oxiliration of aminos. Biogenic aminos. Glycogenic and ketonic aminos. Waist products of nitrogenous exchange: ammonium salts and urea. Urea synthesis. Peculiarities of aminos cyclic exchange. Nucleotide's exchange.	10	15
Blood biochemistry. Blood albumens. Hemoglobine, its functions. Hemoglobinopathy. Hemo synthesis. Albumin serum: Albumin, globulins. Blood enzymes.	4	3
Liver biochemistry. Antitoxic functions. Foreign substances, metabolism. Alcohol detoxification. Pigment metabolism. Jaundice. Diagnostic value of billirubin detection, other bile pigments.	4	3
Biochemistry of intercellular matrix and connective tissue. Collagen, elastine. Glycosaminglicans, proteoglycans. Changes of connective tissue in ageing. Peculiarities of myocardium metabolism.	4	3
Nerve tissue biochemistry. Nerve tissue chemical composition. Energy exchange.	2	3
Muscle biochemistry. Mechanisms of muscle counteraction and relaxation of nervous tissue.	2	3
Exchange processes integration. Correlation in carbo-hydrate lipids and aminos exchange. Processes regulation. Role of insulin, adrenaline, glycocorticoids in exchanging processes regulation.	2	-

HUMAN ANATOMY

COURSE I-II

TERM 1, 2, 3

LECTURES 58

PRACTICAL COURSE 222

EXAMINATION 3 TERM

The subject of Anatomy, its place in medical education. The history of the subject. The tasks and methods of Anatomy. Methods of organization and subordination of different systems in the human organism.	6	2
Organs of body-movement - the important component of human motion. Active and passive components of locomotor system. The skeleton. Bones. Muscles. Tendons, anoneuroses and foscia of the trunk, of the lower and upper extremities. Skeleton, bones, muscles of the skull and face, the teeth, structure and development.	14	54
System of regulation of all functions in human body. The nervous system. Its organization, classification. The cerebro-spinal nervous system (functions of the special senses and movements of the body). Sympathetic nervous system (movements of the viscera). The spinal cord, the brain (the fore-brain, the mid-brain and the posterior hind-brain). Their functions. Cranial nerves. The development of the nervous system. Ductless glands (the pituitary, suprarenal glands, thyroid gland, pineal gland). Organs of sense.	16	78
The blood and the lymph-vascular system (function, principles of organization). The heart, components. Structure of the heart. The arteries, the veins, portal system of veins. The course of the circulation of blood. Microcirculatory channel. The lymphatic ducts, the superficial and deep lymphatic vessels and glands of human body.	12	44
Organs of voice and respiration (function, organization). Nose, larynx, trachea, bronchi. Lungs and pleura. Mediastinum.	2	12
Organs of digestion and their appendages, (function, organization). Mouth, pharynx, teeth, the salivary glands, stomach, intestine, liver, pancreas.	4	18
The urinary and generative organs. Kidney (functions, structure, vascular system). Organs of reproduction (male and female).	4	14

HISTOLOGY, CYTOLOGY, EMBRIOLOGY

COURSE I, II

TERM 2,3

LECTURES 74

SEMINARS 111

EXAMINATION TERM 3

Cytology. Cellular theory. Cell structure, life cycle. Reproduction. Structural organization of the cell. The cytoplasm, organoids, nucleus, inclusions in the cell. General histology. Tissue organization principles. Classification and variability of tissues.	4	6
The principles of general embryology. The main stages and mechanisms of ontogenesis.	6	9
Epithelial tissues. The tissues of internal medium (supporting-trophic). Intercellular interaction and regeneration. The general characteristic of tissues. Blood, lymph. Forms of connective tissues: crumbly, fibrous, thick connective tissue, cartilaginous and osteal. Muscular tissue, special texture of structure function and histogenesis.	12	21
Nervous system. The general characteristics of neural tissue histogenesis. Neurons. Neurosecretory neurocyts. Neuralgia. Nerve fibers. Synapses. Principles of structure organization of nervous system. Principles and special features of structure and en-Ronnie organization of separate part of nervous system. Spinal cord. Truncus cerebri, cerebellum, cerebral cortex. Cyto- and myeloarchitectonics. The vegetative nervous system. Vegetative ganglia. Degenerative and reparative characteristics of nervous system.	12	6
Organs of sense. Morphofunctional organization of organs of equilibrium and hearing. Olfactus and taste. Embriogenesis. Age alterations.	4	9
Cardiovascular system. Organs of hemopoiesis and immunogenesis. General characteristics. Embriogenesis, structure and functional characteristics of blood and vessels, heart, spleen, lymph nodes. Processes of hemopoiesis and immunogenesis. Cellular and humoral immunity.	8	9
Endocrine system. Its characteristics and role in the organism. The neuro-endocrine transmitters, glands-targets, their interaction. Hypothalamo-pituitary system. The thyroid gland and parathyroid gland. Histostructure, secretory cycle. The adrenal gland: cortical and cerebri form substance, their histostructure.	4	9
Digestive system. General principles of structure of the wall of alimentary canal. The large gland of the alimentary tract: the liver, the pancreas. Salivary glands. Their morphofunctional characteristics.	10	18
Respiratory system. The morphofunctional characteristics of its parts. Aeronematic barrier. Blood supply and innervation.	2	3
The skin. Its derivatives. Structure, blood supply, regeration, age peculiarities.	2	3
Urogenitive system. The kidneys. Histophysiology of uropoiesis. Juxtaglomerular apparatus. Male genital system: tests spermatogeny, endocrine function. Appendage. Prostate gland. Female genital system: ovary, uterus, uterine tube, vagina. Genetive and endocrine functions.	8	15

NORMAL PHYSIOLOGY

COURSE II

TERM 3, 4

LECTURES 93

PRACTICAL COURSE 148

EXAMINATION 4 TERM

Subject of Physiology, its place in the system of medical education.	2	4
Physiology and Biophysics of excitable tissues. Electrical phenomena in living systems. Neuromuscular physiology.	12	22
Regulation of the physiological functions. Level of regulation, mechanisms of regulation. Hemostasis and hemokinesis. Mechanisms of selfregulation. The role of endocrine glands in adaptive work of the organism.	4	6
Internal medium of the organism. Blood, lymph. Blood system: composition and physiological properties. Hemostasis. Clotting system and anti-clotting systems. Groups of blood. Methods of examining of the blood system state.	10	12
Physiology of CNS and VNS. Processes of excitement and inhibition in CNS, their interaction. The role of CNS and VNS in adaptive work of the organism. Peculiarities of the physiology of the different structures of the brain.	15	24
The life support system of the organism.	24	56
Physiology of the respiration. External respiration, external respiration, processes of gas change. Regulation of respiration, methods of investigation of the respiration function.		
System of blood circulation. Heart, its function, conductive system of the heart, regulation of the work of the heart. The main hemodynamic indices, microcirculation. Regulation of the vascular tone in the organism. (Functional system of regulation). Peculiarities of regional blood circulation. Methods of investigation of heart work, vascular tone (ECG, Sfigmography, reography, echo-, dynamo cardiography, arterial oscillography).		
Physiology of the digestive system. Digestion in the different parts of gastro-intestinal tract. The role of the digestive glands and endocrine glands in accomplishing digestion function.		
System of thermoregulation. Metabolism and energy exchange.		
Secretory systems of the organism. The role of the kidneys in the secretory function. Regulation of the water-salt exchange.		
Higher nervous activity, sensory system of the organism and higher psychic functions. The role of the biological and social factors in adaptive activity and behaviour of a human being. Mechanisms of the purposeful activity of the organism (theory of P.K. Anokhin). Labour as a purposeful activity, optimal conditions of physiological and mental work. Clinical methods of examination of optical, auditory and other analysatory systems. The method of electroencephalogram in experiment and clinic.	20	24
Physiology of pain. Nociassociation and antinociassociation systems.	4	-
Ontogenesis. Systemogenesis. (P.K. Anokhin)	2	-

MICROBIOLOGY, VIRUSOLOGY AND IMMUNOLOGY

COURSE 11,111

TERM 4, 5

LECTURES 74

PRACTICAL CLASSES 110

EXAMINATION TERM 5

Introduction to medical Microbiology.	2	-
The main groups of microorganisms. The structure of functional organization of bacterial cell. Tinctural characteristics. Complicated methods of colouring.	4	4
Metabolism and cultivation of bacteria.	2	12

1) anabolism and catabolism. Classification of microorganisms according to the types of nutrition. The ferments of bacterial cell. The principles of cultivation and identification of bacteria according to cultural and fermentation property. Identification of pure culture in bacteria mixture.		
2) Antagonism of microorganisms. Antibiotics. Mechanism of its action. Classifications, methods of determination of bacterium sensitivity to antibiotics. Control of drug resistant bacteria.		
Virology. The history of virology development. Nature and origin. The principles of Virion structure. The molecular foundations of virus reproduction. Methods of cultivation and identification of virus.	2	4
Immunology.	20	20
The introduction. Antigens, antibodies.		
Antigenrecognising molecules of the immune system. The primary complex histocompatibility.		
Induction and realization of the immunological response. The genetic foundation of the specific immunological response.		
The mechanism of anti-infective immunity.		
The immunochemical analysis. Basic phenomena and methods.		
Principles of immunoprophylaxis and immunotherapy of infectious diseases.		
The ecological system. «Macroorganism-microorganism". Pathogenicity and virulence factor of bacteria.	2	8
The genetics of microorganisms.	4	4
The mechanisms of bacteria variability.		
Gene engineering. Plastids.		
The normal microflora of human body. Disbacteriosis.	2	6
The principles of medical mycology. Classification. General characteristics and biology of fungi, which have the greatest significance in human pathology. Main group of mycosis. Principles of laboratory diagnosis.	2	4
The introduction in microbiology. The principles of microbiological analysis.	2	-
Staphylococci, streptococci, meningococci, gonococci, escherichia, shigelosis, salmonella, corino- and micobacteria, clostridia, vibrio, zoonooses (plague, tularemia, brucellosis, anthrax-producing germs), spirochets, rickettsia, khlamidia, actinomycets. Classification: biological properties, which are significant in pathogenesis of diseases. Pathogenesis of a disease, immunity laboratory diagnosis, specific prevention.	22	20
Oromixoviruses. Picornaviruses, adenovirus, viruses - hepatitis productive germs, VIH. Classification, virion structure, reproduction peculiarities, pathogenesis, laboratory diagnosis, specific prevention.	10	20

PHARMACOLOGY WITH CLINICAL COURSE OF PHARMACOLOGY

COURSE III

TERM 5, 6

LECTURES 38

SEMINARS 125

EXAMINATION TERM 6

Subject of pharmacology, its place in the medical education. Historical information. Methods and problems of pharmacology at the up-to-date stage.	2	-
Cholinergic and energetic agents: adrenergic and adrenergic agents. Anticholinergic agents. Cholinergic adrenergic blockers.	8	15
Anesthetic agents and analgetics. Inhalation anesthesia agents. Stages of anesthesia, anesthesia theories. Comparative characteristics of inhalation anesthesia agents. Anesthetic and unanesthetic analgetics. Classification. Mechanism of analgesia. The idea of opiate receptors and its endocrine Ligando. Neuroleptics. Tranquilizers and sedative agents, its classification, mechanism of action. Effects and side effects. Indications and contraindications to its use. Comparative estimation of up-to-date anesthetics.	8	20
Psycho-stimulating agents. Nootropins, Analeptics, Antidepressants.	2	10
Cardiotonic agents. Steroid and antisteroid agents. Pharmacodynamics: local and resorption action. Characteristics of some preparations.	2	5
Hypotensive diuresis agents. Classification, chemico-structural mechanism of action: Antagonists of aldosterone, inhibitors of carbohydase and other asthma diuretics.	4	5
Agents, influencing the function of gastro-intestinal tract. Digestive glands.	2	5
Agents, influencing on the blood and respiration system. Classification. Agents influencing on erythro and leukopoiesis. Agents, influencing on the blood coagulation system (coagula and anticoagula). Indications and contra indications to the use. Agents, influencing on the immune process.	2	10
Hormone agents. Classification. Extraction. Hormone preparation on hypophysis, thyroid gland, pancreatic gland, adrenal gland, male and female genital glands. Anabolic steroids. Indications and contraindications.	2	15
Antiseptic and disinfectant agents. Antibiotics. The principles of its use. Antibiotic therapy complications. Sulfanilamids - chemical structure. Antimicrobial spectrum of action. Antituberculosis agents. Chemotherapeutic principles of tbc. Ferment and vitamin agents. Stimulator of regeneration.	6	20
General prescription. Sources of drug production. State pharmacopeia in Russia. Orders of prescription, filling in. Types of drug forms, their characteristics. Main principles of drug action methods of taking into the organism and taking out from the organism of drug substances. Side effects of drug substances.	-	20

CLINICAL PHARMACOLOGY

COURSE V

TERM 10

LECTURES 4

SEMINARS 47

The subjects and tasks of clinical pharmacology. Clinical pharmacokinetics, the influence of diseases of pharmacokinetics of medicine, the correction of doses, clinical pharmacology of herbs.	2	6
Clinical pharmacology of antimicrobial and anti-inflammatory drugs. The choice of medicine and prevention of side-effects.	1	12
Clinical pharmacology of drugs that affect bronchial potency. The principles of choice of drugs, their introduction, the rational dosage considering respiratory system and heart state, allergic component. The method of evaluation of efficiency and safety.	-	6
Clinical pharmacology of drugs that affect the main myocardium functions and vascular tension. Cardiac glycoside alpha adrenergic-receptor agonists, sympatholytic and ganglioblocking drugs, enzymatic inhibitors, calcic canal blockers, pharmacokinetic and pharmacodynamic peculiarities in case of main and accompanying diseases.	-	12

Clinical pharmacology of drugs that affect the main functions of gastro-intestinal tract.	1	6
Clinical pharmacology of diuretics, their groups. Choice, dosage, medical interaction, the correction and prophylaxis of side-effects.	-	10

PATHOLOGICAL ANATOMY
COURSE III
TERM 5, 6
LECTURES 74
PRACTICAL CLASSES 89
EXAMINATION TERM 6

Alteration. Forms of alteration, dystrophy and necrosis. The cellular and extracellular mechanisms of trophism. Classification. Parenchymatous mesenchymal combined forms of dystrophy. Necrosis, etiopathogenesis, clinical significance.	10	8
Disturbances in blood circulation, their classification. Thrombosis, embolism, ischemia, infarctions - their etiopathogenesis and morphological characteristic.	4	6
Inflammation. Biological nature, etiology, morphogenesis. Consequences. Clinical significance.	4	4
Immuno-pathological processes. Compensatory and adaptive processes.	4	4
Tumors. Histogenetic classification of tumors. Epithelial, mesenchymal, tumors of blood system, melanin forming and neural tissues. Macro- and microscopic diagnosis, clinico- morphological parallels.	12	8
The diseases of blood system. Anemia, the causes of anemia. Hemorrhage Disturbances of blood formation. Microscopic picture. Outcomes.	2	8
Cardiovascular system diseases. Atherosclerosis, hypertension, ischemic disease. Pathogenetic mechanisms. Morphological picture. Outcomes.	6	8
Collagenous diseases. Patho- and morphogenesis. Morphology of heart lesions and visceral lesions at rheumatism.	2	4
Diseases of respiratory system. General question of pathogenesis and morphology of lung diseases. Acute pneumonias, chronic non-specified lung diseases. Clinico- morphological parallels. Cancer of the lung, morphology, outcome.	4	6
Diseases of alimentary tract. Etiopathogenesis and morphology of acute and chronic forms of gastritis. Ulcer and carcinoma. Pathomorphology, outcome. Hepatic diseases, hepatosis, hepatitis, cirrhosis. Etiopathogenesis, diagnosis. Outcome.	4	4
Diseases of kidneys. The modern classification. Etiopathogenetic factors of their development. Clinical and morphological parallels.	4	4
Diseases of endocrine glands. Classification. Etiopathogenesis of diabetes mellitus and strumous disease.	2	4
Infectious disease. Biological and social factors in the development of infectious diseases. Morphology and immunomorphology of infections. Classification. Droplet infections. Meningococcal infections. Diphtheria. Scarlet fever. Intestinal bacterial infections. Tuberculosis. Morphology of primary hematogenic and secondary tuberculosis.	14	8
"Pathomorphosis" and pathology of therapy. Morphological characteristic of allergic responses to drugs and ionizing radiation. The way of prophylaxis of medical, noise and vibratory diseases.	2	4

PATHOLOGICAL PHYSIOLOGY
COURSE III
TERM 5-6
LECTURES 38
LABORATORY STUDIES 125
EXAMINATION 6TH TERM

Subject and methods of the pathological physiology. The main conception of the general nosology. General etiology and pathogenesis. The principle of determinism in pathology. The idea of polyetiologic diseases. The properties of the pathogenic factors, their categories. The role of the local and general changes, cause and effect relations in pathogenesis. The main and the leading part in pathogenesis. The role of the heredity, constitution, sex and age in pathology.	2	12
Inflammation, etiological factors, alteration (structural and metabolic in the focus of inflammation). Mechanisms of exudation and emigration. Proliferation. Reaction of the organism on the focus of inflammation.	2	10
Typical disturbances of metabolism (diabetes mellitus). Disturbances of lipid metabolism (atherosclerosis). Disturbances of protein metabolism. Hyper and hypovitaminoses.	6	12
Tumor's growth. Characteristics, levels. Modern views on the etiology and pathogenesis.	4	8
Pathophysiology of the blood system. Anemia and polycythemia, Leucocytosis and leukopenia. Leukemoid reactions, leukosis. Coagulopatia. Causes and pathogenesis of these conditions, changes in the organism.	4	12
Pathophysiology of the systemic blood circulation. Deficiency of the blood circulation types, causes, pathogenesis. Mechanisms of the compensation, manifestation of the decompensation. Atrial hypertension, hypertension disease.	4	16
Pathophysiology of the external respiration. Deficiency of the external respiration. Pathological forms of breathing. Dispnea. Hypoxia. Causes, types, consequences.	4	12
Pathophysiology of digestion. General etiology, Pathogenesis of the disturbances of digestion system. Significance of the neurogenous and humoral factors. The reasons and mechanisms of the disturbances of the secretory and incretory functions of the salivary glands. The disturbances of the stomach and intestine functions, relation between secretory and motor disturbances of the cavitory and pariental digestion. Mechanism of the trophic disturbances of the stomach and intestine (ulcer). Pathophysiology of-the operated stomach.	2	12
Pathophysiology of the liver. General etiology and pathogenesis of the liver diseases. Disturbances of the portal blood circulation. Parenchymatous disturbances of the liver. Acute insufficiency of the liver, hepatic coma. Jaundice, types. Causes and mechanisms of gallstones formation in liver.	2	8
Pathophysiology of the kidneys. Mechanisms of disturbances of the glomerular filtration, elective tubular reabsorption, secretion and excretion. Manifestation of the disturbances of the kidneys functions: changes in diuresis and composition of urine. The idea of the clearance test. Acute and chronic kidney chronic efficiency. Transplantation of the kidney.	2	5
Pathophysiology of the endocrine system. General etiology and pathogenesis of the endocrine disturbances. The main types. Pathology of the thyroid gland (hypo- and hyperthyroidism). Pathology of the parathyroid glands, pathology of the genital glands. Pathology of the hypothalamo-pituitary system. Pathology of the adrenal glands.	2	8
Pathophysiology of the nervous system. General etiology of the disturbances of the nervous system. Protective, rehabilitative and compensating processes of the nervous system, rudimentary reactions. Pain. External conditions. Biological condition of pain as a sign of danger. Pathophysiological basis of the anesthesia, stress. Stages and mechanisms of development, the main manifestation. Protective-adapting and pathogenic significance of stress. Shock. The types of shock. Stages of shock. The main structural and functional disturbances on the different stages of shock. Coma. Types of coma.	2	12

**MEDICAL INFORMATICS
COURSE III
TERMS LECTURES 8
PRACTICAL CLASSES 30
CREDIT TEST TERM 5**

Medical informatics. Medical information system. Automatized systems of management in public health.	2	1
The treatment of text information. The text processor WORD. Purpose of the processor. Practical use of the processor. Menu, use of the dialog windows (tables). Distinguishing of the text-blocks. Use of the exchange buffer. Going through. Intervals exchange buffer. Intervals between the lines. Fonts. Columns. Tables. Control of spelling. Printing of texts. Working out and printing of documents.	2	12
Treatment of numerical information. Electronic tables. EXCEL. Its purpose. Menu. The simple and automatic input of data. Use of functions. Going through. Formation of data. Fonts. Frame of tables. Distinguishing the blocks. Copying of data. Operations with several tables. Printing. Plot of data. Statistical treatment of public health data by use of EXCEL.	2	8
System of data base management FOXPRO. Description of the structure and relations. Database. Kinds of data dimension of margins. Regimes of input and 2 edition. Creation of a new data bases with partial transfer of margins and information. Choice of a new data base for going through information. Creation of certificates and reports. Working out and description of report structure. Filling in the form of the report. Printing reports. Operation with a whole file. Working out, description and creation of applied data base "Dispensary file of the patient".	2	10

**GENERAL HYGIENE AND ECOLOGY
COURSE III, IV
TERM 6, 7
LECTURES 44
PRACTICAL TRAINING 64
EXAMINATION TERM 7**

Hygiene as a science and a practical branch of health care. Organization of sanitary and epidemiological care for people. Hygiene requirements for lay out and construction of medical institutions.	6	10
Hygienic characteristics of the air. Assessment of anthropogenic pollution of the air. Hygienic ventilation assessment.	2	5
Water as a factor of biosphere. Hygienic requirements of drinking water quality. Sanitary protections of reservoirs.	6	10
Hygienic assessment of natural and artificial light. Light fixing. Methods of assessment. Ultraviolet insufficiency prevention.	2	5
Soil as an environmental factor. Sanitary soil protection under the conditions of scientific and technological progress.	2	5
Modern aspects of rational diet. Prevention of alimentary diseases and food poisoning. Primary prevention of the diseases of teeth and jaw apparatus.	6	5
Hygiene of work for doctors and medical personnel (work with the sources of ionizing radiation).	4	5
Factors of industrial sphere, their effect on the worker's health, Hygienic problems and health care measures systems.	6	10
Climate and health prevention of the diseases caused by unfavorable meteo-factors.	2	5
The basis of the organization and sanitary inspection in the army.	4	5
Hygienic problems in ecology.	2	6
The problems of children and teenagers hygiene.	2	10

**SOCIAL MEDICINE & ORGANIZATION OF PUBLIC HEALTH, ECONOMICS THEORY & ECONOMICS OF PUBLIC HEALTH
COURSE IV,V
TERM 8,9
LECTURES 50
PRACTICAL CLASSES 90
EXAMINATION TERM 9
CREDIT TEST TERM II
STATE EXAMINATION TERM 12**

Social medicine and organization of the Public health in the system of the modern problems of demography. Morbidity of the population. Methods of studying. The main sanitary statistic and demographic indices.	4	20
Cardio-vascular diseases, malignant tumors. Traumatism as a medico-social problem.	4	5
Tuberculosis, psychic dysfunctions, alcoholism, narcomania, as a medico-social problem. Organization of the medical help.	4	5
The diagnosis of the legislation of health protection in Russia. The authorities of Public Health. Classifications, medical institutions, organization of the hospital and polyclinical help for children and adult population in towns and country.	6	5
Organization of the obstetric-gynecological care. The service of family planning.	4	5
Organization of the sanitary-resort care for the adults and children.	4	5
Sanitary-and-epidemiologic concerning sanitary-epidemiologic inspection in Russia.	4	5
Organization of the emergency medical service in towns and country. Organization of the stomatological care.	4	5
Modern problems of ethics and medical deontology.	3	5
Medical education in Russia and abroad. Post-graduate education.	3	5
Subject and aims of economy. Establishment of different forms of property.	3	5
Market economics. The market of the medical services. The main concepts of capitalism, its forms and accumulation. The scientific bases of payment in Public Health. The funds of the enterprises and their turnover of capital. Self supporting basis in Public Health. The rules of giving charged services. The peculiarities of taxation in Public Health.	3	10

**EPIDEMIOLOGY
COURSE IV
TERM 7
LECTURES 12
PRACTICAL TRAINING 30**

Introduction, Subject and methods of Epidemiology. History, the role of Russian scientists. The laws of Epidemiology. Modern spreading of infectious diseases.	2	4
The study about epidemical process. The concept of the three elements of epidemical process. The system of prophylactic and anti-epidemic measures. Scientific basis of elimination of infectious diseases.	2	4
Immunity and immunoprophylaxis. Types of immunity. The main principles of immunoprophylaxis in fight with infectious diseases. Post-vaccination complications.	2	4
Epidemiology and prophylaxis of enteric fever and paratyphoid fever A and B. Etiology, spreading. Sources and mechanism of transmission. Characteristics of principle features of epidemical process. Specific prophylaxis.	2	4
Epidemiology and prophylaxis of dysentery. Etiology, spreading. Sources and mechanism of transmission. Out-patient supervision of those who have had the disease.	1	4
Epidemiology and prophylaxis of cholera. Etiology, spreading. Sources and mechanism of transmission. Peculiarities of El-Tor. The system of prophylactic and anti-epidemic measures. Specific prophylaxis.	1	4
Epidemiology and prophylaxis of virus hepatitis A and B. AIDS infections. Etiology, spreading. Sources and mechanism of transmission. Outpatient supervision of those who have had a disease.	2	6

**NURSING (Therapy)
COURSE II
TERM 4
LECTURES 8
PRACTICAL CLASSES 28
CREDIT TEST 4 TERM**

The importance of the nursing and the work of the medical staff in medical institutions. Deontological rules. The work-regimen of medical establishments. The reception ward. Sanitary processing and transportation of the patient to the ward. Personal hygiene of the patient. Patients' nourishment. Medical diets (tables).	2	6
Body temperature, it's measuring. Methods to use medicine (remedies). Hypodermic, intravenous, intramuscular injections' technique.	1	6
Nursing the patients with the diseases of respiratory and vascular organs. Taking pulse, blood, pressure measuring.	2	6

Observation and nursing patients with the diseases of digestive tract and of kidneys. Examination of the secretion function of the stomach. Duodenal intubation. Putting enema technique.	1	6
Nursing the clinically ill and agonizing patients. Idea of revivification. Non-direct chest massage and control respiration methods.	2	4

PROPEDEUTICS AND INTERNAL DISEASES

**COURSE III
TERM 5-6
LECTURES 72
PRACTICAL CLASSES 144
EXAMINATION 6 TERM**

Subject of Propedeutics of internal diseases. Russian therapeutic schools. Problems of deontology. Patient examination scheme. Anamnesis of a patient as a method of investigation. Importance of visual examination, palpation, percussion and auscultation in diagnostics.	4	10
Examination of the patient with respiratory organs diseases. Role of anamnesis, Technique of lung palpation, percussion and auscultation. Bronchoscopy, roentgenoscopy and roentgenography.	10	10
Examination of the patient with heart diseases. Heart percussion and changes of heart borders in heart diseases. Auscultation of heart, heart tones, their origin, mechanism of appearance, classification, diagnostic value.	8	10
Examination of the patient with alimentary tract diseases. Method of orienting superficial and deep palpation. Gastric juice examination. Roentgenoscopy and gastroscopy. Palpation of gall-bladder, spleen and kidneys. Methods of investigation and symptoms of intestine, liver and kidney troubles.	8	5
Methods of investigation and symptoms of blood supply and endocrine system diseases. Diagnostics.	4	5
Methods of instrumental investigation of cardiovascular system. X-ray examination of the heart, echocardiography. Electrocardiography. Registration and interpreting technique. ECG in hypertrophy of atria and ventricles. Extra-systole, various types of blockades.	4	15
Chronic bronchitis. Bronchial asthma. Lung emphysema. Pneumonia. Bronchoectotic disease and lung abscess. Symptom, methods of clinical and instrumental detection.	12	20
Rheumatism and its manifestation. Mitral and aortal heart defects. Heart insufficiency. Myocardial infarction. Atherosclerosis and ischemic heart disease. Hypertension. Symptoms, mechanism of development. Use of ECG echo-and phonocardiography in diagnostics.	12	20
Digestive organ diseases. Chronic gastritis, classification, symptoms. Gastric and duodenal ulcers. Chronic cholecystitis, hepatitis, liver cirrhosis. Mechanism of development, symptoms. Methods of clinical, instrumental and laboratory detection.	8	20
Kidney and urinary tract diseases. Acute and chronic glomerulonephritis, pielonephritis, urolythic disease. Symptoms, mechanism of development, clinico-instrumental and laboratory methods of detection.	4	10
Laboratory methods of blood test (Hemoglobin quantity, erythrocytes, leucocytes etc.), urine test (physical and chemical index, sedimentation microscopy, functional probes), gastric juice and duodenum contents. Mucous and pleural substrate. Clinical importance and changes in various pathological conditions.		10

THERAPEUTIC DISEASES WITH COURSE OF POLYCLINICAL THERAPY
COURSE IV, V, VI
TERM 8, 9, 10, 11, 12
LECTURES 223
PRACTICAL CLASSES 656
CREDIT TEST TERM 8, 9, 12
EXAMINATION TERMS 8, 10

Introductory lecture. The purpose and tasks of treatment of special therapeutic diseases. Making a diagnosis. Introduction into deontology. From the history of therapeutic clinic.	2	-
Acute pneumonias. Taking a clinical case history of a patient with acute pneumonia. Etiology and pathogenesis of acute pneumonia. Classification. Clinical manifestations of croupous pneumonia. Complications. Methods of treatment, prophylaxis. Chronic bronchitis. Examination of the patient with chronic (acute) bronchitis. Etiology, pathogenesis. Smoking as a risk factor. Classification. Clinical manifestations. Treatment, physiotherapy treatment. Prophylaxis. Questions of temporary disability. Bronchial asthma. Taking a clinical case history of a patient. Etiology, pathogenesis. Classification. Clinical assessment of the gravity of the disease. Assessment of the bronchoobstruction by laboratory and functional tests. Prodromal symptoms of asthma. Modern concept of asthma. Treatment and prophylaxis of bronchial asthma. Lung heart. Peculiarities of central hemodynamics. The role of early diagnostic of broncho-lung diseases, their treatment.	14	20
Heart-vascular diseases. Rheumatism. Taking a clinical case history. Etiology and pathogenesis. Classification, making a diagnosis, Differential diagnosis. Treatment, prophylaxis. The role of rheumatic center. Rheumatic heart defects. Clinical case history of a patient with rheumatic mitral heart defect. Peculiarities of hemodynamics in mitral stenosis. Clinical manifestations, making a diagnosis, complications, recommendations and methods of surgical treatment. Infectious endocarditis. Etiology, pathogenesis, making a diagnosis and treatment Aortal heart defects. Hemodynamics, complications. Treatment of diseases of aortic valve. Cardiac arrhythmia. Classification. Etiology, pathogenesis. Case history, clinical manifestations, making a diagnosis of extrasystole, cardiac fibrillation, heart block. Therapeutic and surgical tactics. Questions of disability. Sudden death. Arterial hypertension. Modern points of view on making a diagnosis and treatment. Ischemic heart disease, myocardial infarction. Complications, rehabilitation. Circulatory insufficiency. Diseases of joints: rheumatoid, arthritis.	28	65
Gastritis acute and chronic. Modern methods of prophylaxis and treatment Gastric and duodenal ulcers. Making a diagnosis, treatment, complications. Cholecystitis, classification, clinical manifestations, treatment. Cirrhosis of the liver-modem views on etiology, clinical manifestations.	12	20
Diffuse glomerulonephritis. Chronic kidney insufficiency. Doctor's tactics.	5	5
Diabetes mellitus. Diffuse toxic goiter. Diseases of hypophysis. Diseases of the adrenal gland. Urgent condition in endocrinology.	18	33
General physiotherapy. Electricity and its application in treatment, galvanization, electrophoresis, impulse electricity, lazer therapy.	10	10

COURSE OF THERAPEUTICAL POLYCLINICS

Organization of medico-prophylactic aid to the population in polyclinic. Modern diagnostic possibilities in treatment in polyclinical conditions. Deontological problem: "A doctor and a patient" and its solution in polyclinics.	4	1
Arterial hypertension. Making a diagnosis, treatment, Examination of disability. Hypertensive crisis. Diagnostic "key". Its significance and realization in the work of polyclinic.	2	3
Joint syndrome, difficulties and mistakes, The question of adequacy in treatment.	2	3
Chest pain syndrome. Coronarogeneous and non-corarogeneous lesions of myocardium, differential diagnosis, doctor's mistakes. Therapeutic tactics, recommendations to surgical treatment. Questions of disability. Rehabilitation of the patients, survived from the myocardial infarction.	4	3
Urgent conditions in patients treated at polyclinic (angina pectoris, edema of the lungs, arrhythmia, work of the ambulance (reception ward)).	2	3
Cardiac insufficiency, making a diagnosis, home treatment, direction to hospitalization, questions of disability.	2	3
Diabetes mellitus in the work of the polyclinic, distinguishing a type, severity, and adequate therapy. Questions of disability.	2	3
Broncho-obstructive syndrome in polyclinic: making a diagnosis, its verification, methods of examining a patient, recommendations for hospitalization, methods of treatment pneumonias, bronchial asthma. Questions of disability.	2	3
Enlarged liver syndrome. Differential diagnosis of the diseases of the hepato-biliary system.	-	3
Urine syndrome. Verification of the diagnosis, stages of examination in polyclinics, recommendation of hospitalization. Methods of treatment, questions of disability.	-	3
Syndrome: pain in legs, headaches. Clinical discussion.	-	3

PHTHISIOPULMONOLOGY

Tuberculosis doctrine. Etiopathogenesis, Epidemiology. Pathomorphology. Modern clinical classification. Peculiarities and methods of examination. X-ray tuberculinodiagnosis.	1	7
Local forms of primary TB.	4	10
Disseminated tuberculosis of the lungs, tuberculous meningitis. Pathogenesis, clinical studies, diagnosis. Focal lung TB, its role in progressive form development.	6	20
Cavernous and fibrocavernous TB, cirrhotic TB, tuberculous pleurisy. Lung tuberculoma. Pathomorphology, pathogenesis, clinical studies, complications, diagnosis. Principles of complex therapy.	6	20
Structure and antituberculous service. Antituberculous dispensary, antituberculous vaccination and chemoprevention. Out-patient department. Validity examination.	-	18

CLINICAL THERAPY

Each course includes clinical lectures with demonstration and discussion of diseases, activities in the guidance of experienced specialists.

5-th course

Cardiology	12	15
Pulmonology	4	5
Hematology	8	20
Gastroenterology	4	10
Nephrology	4	10
Occupational diseases	10	28
Investigation of a patient.	-	10

6th course

The basic principles of Deontology.	2	-
Cardiology	12	99

Pulmonology	6	54
Nephrology	6	36
Gastroenterology	6	54
Hematology	4	60
Immunology	4	24
Fevers of unknown genesis. Medicinal disease.	4	-
Gerontological diseases	2	-
Thrombopathic syndrome	2	-
Treatment at health resorts .	2	-

NURSING (Surgery)

COURSE II

TERM 4

LECTURES 6

PRACTICAL CLASSES 30

CREDIT TEST 4 TERM

The importance of the nursing and the work of the medical staff in medical institutions. Deontological rules. The work-regimen of medical establishments. The reception ward. Sanitary processing and transportation of the patient to the ward. Personal hygiene of the patient. Patients' nourishment. Medical diets (tables).	1	6
Body temperature, it's measuring. Methods to use medicine (remedies). Hypodermic, intravenous, intramuscular injections' technique.	1	6
Nursing the patients with the diseases of respiratory and vascular organs. Taking pulse, blood, pressure measuring.	1	6
Observation and nursing patients with the diseases of digestive tract and of kidneys. Examination of the secretion function of the stomach. Duodenal intubation. Putting enema technique.	1	6
Nursing the clinically ill and agonizing patients. Idea of revivification. Non-direct chest massage and control respiration methods.	2	6

GENERAL SURGERY

COURSE III

TERM 5-6

LECTURES 50

PRACTICAL CLASSES 113

EXAMINATION 6 TERM

Concept of surgery and surgical diseases. Short history of surgery, history of Russian surgery. The development of modern surgery.	2	3
Antisepsis, classification, antibiotics in surgery, mechanical antisepsis. Methods of wound drainage. Physical, chemical and biological antisepsis.	2	5
Asepsis. Hospital infection, methods of its prevention. Contact infection, prophylaxis. Implantation infection, sterilization methods. Asepsis of operations members and operative field.	2	5
Bleeding. Arrest of bleeding. Bleeding classification, temporary and final hemostasis, spontaneous bleeding arrest, concept of coagulation-anti-coagulation system of blood. Vascular suture.	2	5
General anesthesia. General and local anesthesia. Up-to-date condition of anesthesiology. Basic substances used in narcosis. Premedication. General anesthesia usage. Most typical complications.	2	5
Local anesthesia. Types of local anesthesia. Local anesthetics. Techniques of local anesthesia. Infiltrative, conductive, epidural, intraosseous anesthesia. Novocainic blockade. Possible complication.	2	5
The base of transfusiology. Blood transfusion and blood substitutions. Historic data. Man's antigen-antibody (ABO) Rh-factor system. Blood group determination. Up-to-date rules of blood transfusion and blood components. Blood substitutes. Mechanism of action.	2	5
The examination of surgical patient. Medical documents. Methods of patient examination. The role of the laboratory, instrumental and physical examination methods. Sequence of method usage in examination. Out-patient card and disease history.	2	5
Surgical deontology. The concept of deontology as necessary element of surgical action.	2	5
Wounds and wound process. Wound types. Associative and combined wounds. The course of wound process. Surgical wound management, wound treatment.	4	10
General disturbances of life activity in surgical patients. Terminal condition. Pre-agony, agony, clinical death. Shock: causes, pathogenesis, clinical picture, diagnosis, phases.	2	5
Mechanical trauma. Traumatic toxicosis. Fractures. Types of mechanical injuries (traumata). Classification of bone traumata. Diagnosis	4	10

and treatment. Dislocations. Diagnosis and dislocation treatment.		
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Thermal and chemical burns. Frostbite. Electrotrauma. Combustiology. Classification of burns, diagnosis of severity and treatment. Burn disease. X-ray burns. Types of cool trauma. First aid. Treatment and prophylaxis. The action of electro-current and caustic chemical substances.	2	5
Concept of chemical infection and its manifestation. Acute aerobic and anaerobic surgical infection. Local and general manifestation. Diagnosis and treatment.	2	5
Purative surgery of skin, subcutaneous tissue and tissue interspace. Hand suppurative surgery. Abscess, phlegmona, furuncle, carbuncle, lymphadenitis, lymphangitis. Panaritium. Etiology, clinic, pathogenesis, diagnosis and treatment.	2	5
Suppurative surgery of glandular organs, serous cavities, bones and joints. Parotitis, mastitis, pancreatitis. Peritonitis. Empyema of the chest. Purative bursitis. Osteomyelitis. Principles of general and local treatment.	2	5
Acute specific infection - tetanus, Siberian ulcer, wound diphtheria. Chronic specific infection - bone joint tuberculosis, anti-mucous syphilis, leprosy.	2	5
General purative surgical infection. Sepsis. The concept of first injury. General and local treatment. Up-to-date principles of treatment.	2	-
Basic surgical blood disturbances. Basic disturbances of blood circulation. Dry and moist gangrene. Chronic and acute disturbances of venous and arterial blood circulation. Decubitus.	2	5
General problems of oncology. Epithelial tumors. Connective tissue tumors. Clinical picture, diagnosis, principles of treatment.	6	10
Basis of plastic surgery and transplantology. Pre- and post-operative period.	4	5

**INTENSIVE THERAPY
COURSE V
TERM 9
LECTURES 8
PRACTICAL CLASSES 3
CREDIT TEST TERM 9**

General disturbances of vital activity in surgical patients. The clinical evaluation of general condition, the methods of examination of vitally important functions of the organism (blood circulation, respiration etc.). Terminal conditions. Clinical and biological death. Resuscitation in case of clinical death. Clinical criteria of efficiency. Shock. Causes, pathogenesis, stages. First aid in case of shock. Classification.	2	6
General anesthesia. Pain and anesthesia. The theory of narcosis. Inhalation and non-inhalation anesthesia. The main components and stages. The evaluation of degree of anesthesia according to the stages. The prophylaxis of complications. Local anesthesia. The methods, local anesthetics.	2	6
The methods of control of vitally important functions of organism, during resuscitation and intensive therapy. Monitor system of screening and control.	1	6
Intensive therapy in case of acute respiratory incompetence. Causes and pathogenic mechanisms. Intensive therapy during pre-hospital and hospital stages. The principles of oxygenous and aerosolic therapy.	1	6
Emergent and intensive therapy in comatose conditions of various etiology. Postresuscitatory cerebral pathology. The classification of the degree of comatose state. The diagnosis of the brain death in moral and legal aspects.	2	6

**OPERATIVE SURGERY
COURSE 3, 4
TERM 6, 7
LECTURES 30
PRACTICAL CLASSES 97
EXAMINATION 7 TERM**

Introduction into the course of Operative Surgery and Topographic Anatomy. General principles of angioplasty. Topographoanatomical reasons for operations on blood vessels. Tissue dissection and methods of stopping hemorrhage. Types of sutures.	4	6
Operations on nerve trunks, tendons and muscles. General principles of amputation and exarticulation of extremities.	2	14
Operations on bones, their specific features. Osteosynthesis. Osteotomy. Arthroscopy, joint resection, arthrodesis.	2	16
Problems of organs and tissue transplantation. Current transplantology, rejection mechanisms. Methods of tissue preservation. Plastic operations.	2	-
Operations on the head and neck. General principles of maxillofacial surgery. Topographoanatomical features.	4	15
Operations on the thoracic wall, the organs of thoracic cavity, on the heart and the arterial vessels.	4	12
General principles of abdominal surgery. Operations on the small and large intestines, stomach, pancreas, liver and bile ducts.	4	18
Operations on the organs of male and female pelvis, in inguinal and femoral hernias.	2	6
Operations on the vertebrae and spinal column.	2	4
General principles of the primary surgical wound processing. Operations in acute purulent infection.	4	6

SPECIAL SURGICAL DISEASES
COURSE IV, V, VI
TERM 7, 8, 9, 10, 11, 12
LECTURES 150
PRACTICAL CLASSES 315
CREDIT TEST TERM 11
EXAMINATION TERMS 8, 10

Appendicitis. Anatomical and physiological features. Etiology. Clinical manifestation, making a diagnosis, Treatment, complications and prophylaxis.	4	12
Abdominal Hernias. Anatomical and physiological features etiology. Clinical manifestation, making a diagnosis, differential diagnosis. Treatment, complication and prophylaxis.	4	8
Cholelithiasis. Cholecystitis without stones. Anatomical and physiological features. Etiology, pathogenesis. Clinical manifestations. Making a diagnosis, differential diagnosis of jaundice. Treatment. Complications, prophylaxis. Post-cholecystectomy syndrome.	4	8
Pancreatitis. Anatomical and physiological features. Etiology and pathogenesis. Clinical manifestations, making a diagnosis, differential diagnosis. Indications and contraindications to surgical treatment. Complications and prophylaxis.	2	8
Intestinal obstruction. Anatomical and physiological features, Etiology, pathogenesis. Clinical manifestations, making, a diagnosis, differential diagnosis. Methods of treatment. Possible complications and prophylaxis.	2	8
Peritonitis. Anatomical and physiological features of abdominal cavity. Etiology, pathogenesis. Clinical manifestations, making, a diagnosis, differential diagnosis. Methods of treatment. Contemporary methods of treatment Possible complications and their prophylaxis.	2	8
Gastric and duodenal ulcers. Anatomical and physiological features. Etiology, pathogenesis. Clinical manifestations, making a diagnosis, differential diagnosis. Complicated forms of gastric ulcers. Methods of treatment. Indications and contraindications to surgical treatment. Complications and their prophylaxis.	6	12
Disease of gullet. Anatomical and physiological features. Etiology pathogenesis. Clinical manifestations making, a diagnosis, differential diagnosis. Methods of treatment. Indications and contraindications to surgical treatment. Complications and their prophylaxis.	2	4
Diseases of the rectum. Cancer of the rectum. Anatomical and physiological features. Etiology pathogenesis. Clinical manifestations making a diagnosis, differential diagnosis. Methods of treatment. Indications and contraindications to surgical treatment. Complications and their prophylaxis.	2	4
Diseases of peripheral arteries and veins. Anatomical and physiological features. Etiology pathogenesis. Clinical manifestations making a diagnosis, differential diagnosis. Obliterating atherosclerosis, endarteritis. Raynaud's disease. Buerger's disease, varicose dilatation of the lower extremity veins. Post-thromboembolic syndrome. Methods of treatment. Indications and contraindications to surgical treatment. Complications and their prophylaxis. Diseases of heart and major vessels. Congenital malformations, pathology.	2	4

Diseases of lungs, pleura and sternum. Pleura empyema. Abscess and lung gangrene. Bronchoectomatic disease. Mediastinitis.	4	8
Diseases of the thyroid gland. Middle and lateral cysts of the neck. Etiology, pathogenesis. Clinical manifestations making a diagnosis, differential diagnosis. Methods of treatment. Indications and contraindications to surgical treatment. Complications and their prophylaxis.	2	4
Diseases of the mammary gland. Mastitis, benign tumors. Malignant tumor of the mammary gland. Etiology, pathogenesis. Clinical manifestations making a diagnosis, differential diagnosis. Methods of treatment. Indications and contraindications to surgical treatment. Complications and their prophylaxis. Medical prophylactical examination.	2	3

PEDIATRIC SURGERY

Anatomo-physiological features in children. Achalasia, intestinal intussusception, radius head subluxation. Urinary system diseases. Problems of pediatric oncology.	2	12
Diagnostics and differential diagnostics of critical conditions in children with acute pathology of abdominal cavity. Purulent surgery in children.	2	22
Specific features of trauma in children. Specific means of emergency and specialized aid.	2	8
Emergent neonatal surgery. Intensive care in children.	2	16

CLINICAL SURGERY

Congenital and acquired heart valvular diseases. Incidence, etiology and classification of valvular diseases. Clinical symptoms and diagnostics. Indications to operative treatment. Surgical treatment of ischemic heart disease (IHD) and its complications. Pericarditis. Surgical treatment of arrhythmia.	16	24
Diseases of the esophagus and mediastinum. Congenital defects. Esophageal benign and malignant diseases. Clinical picture, diagnostics, treatment. Mediastinum tumors and cysts.	14	18
Acute gastroduodenal hemorrhages. Sources. Diagnostic methods, determination of blood loss extent. Method of conservative and operative treatment. Surgical transfusiology.	14	18
Non-tumor large intestine diseases, classification/ developmental defects. Etiology, pathogenesis, clinical picture, treatment. Hirschprung's disease, Crohn's disease, diverticulosis, nonspecific ulcerative colitis. Intestinal fistula. Classification, treatment.	12	18
Surgical infection. Generalized purulent peritonitis. Classification. Pathogenesis. Clinical picture. Treatment methods. Present aspects of peritonitis treatment.	12	20

Peripheral artery and veins diseases. Obliterative disease of the main and peripheral arteries (obliterative arterosclerosis, Buerger's disease, thrombangiitis, endarteritis), vein varicosity of low extremity, acute thrombophlebitis, post-thrombophlebitis syndrome. Etiology, pathogenesis, clinical symptoms, treatment.	12	22
Complications and rare forms of hernias. Classification, symptoms, methods of treatment. Specific features and their diagnostics.	12	16
Liver and pancreas lesions (cancer, cysts, benign tumors, acute and chronic pancreatitis, external pancreatic fistula). Symptoms, diagnostics and methods of treatment. Mechanical jaundice. Etiology, pathogenesis, symptoms, treatment. Significance of the present extra-corporal detoxication methods. Operated stomach diseases. Methods of functional diagnostics. Conservative therapy, methods of surgical correction. Outpatient and in-patient surgery, prophylactical medical examination.	14	30

UROLOGY
COURSE IV
TERM 7
LECTURES 10
PRACTICAL CLASSES 28
CREDIT TEST WITH MARK TERM 7

Urology, its place in the system of medical education. Abnormalities in the development of urino-genital system. Forms of renal pathology (aplasia, hypoplasia, dystrophy, polycystic kidneys solitary cysts); ureter pathology (ureteric achalasia, ureterocele, ectopia); the bladder, scrotum abnormalities. The method of diagnosis.	2	6
Tumors of urogenital system; tumors of kidney parenchyma, renal pelvis, ureter (malignant and benign). Diagnosis and treatment.	2	8
Traumas of the urinogenital system (Bladder, scrotum, urethra). Open and close trauma. The clinical picture, operative treatment.	2	6
Pyelonephritis. Etiology and pathogenesis. Primary and secondary, acute and chronic forms. The pathological anatomy, the clinical picture, treatment. The tuberculosis of organs of urino-genital system. Etiology, pathogenesis, the clip-Nicole picture of tuberculosis process of various localization. Diagnosis, treatment, prophylaxis.	2	8

STOMATOLOGY
COURSE IV
TERM 8
LECTURES 12
PRACTICAL CLASSES 22
CREDIT TEST 8 TERM

Stomatology in the system of medical education. The methods of examination of stomatological patients. Dental diseases and their prophylaxis. Maxillofacial sour-Gerry (local and conduction anesthesia). Dental extraction: indications and contraindications. Complications. The development of odontogenous focus in the development of infectious, allergic diseases.	2	4
The peculiarities of inflammatory diseases of maxillofacial region (phlegmon of face, Dupuytren's phlegmon, odontogenous osteomyelitis of jaws, actinomycosis of maxillofacial region).	2	4

Tumour forming processes of maxillofacial region (organospecific). Pre-cancer diseases. The tactics of a doctor.	2	4
The traumas of maxillofacial region. The fractures of lower and upper jaws. Radiative and thermal lesions.	3	6
The principles of restorative surgery of maxillofacial region in case of congenital deformations.	3	4

ORTHOPEDECS & TRAUMATOLOGY
COURSE V
TERM 9, 10
LECTURES 40
PRACTICAL CLASSES 102
CREDIT TEST 10 TERM

Introduction into Traumatology and Orthopedics. Organization of traumatological and orthopedical aid.	4	8
Bone tissue regeneration. Principles and methods of fracture and dislocation treatment. Anesthesia. Plaster bandages, skeletal extension. Operative treatment - types of osteosynthesis.	8	18
Congenital locomotor system diseases: congenital hip dislocation, pigeon-toed state, syndactylia. Degenerative dystrophic joint diseases (coxartrosis, osteochondrosis of the spine, osteochondropathy). Bone tumors. Reconstructive surgery. Palliative operations.	8	24
Polytrauma. Multiple and combined injury of pelvis and pelvic organs. Closed spine injuries.	8	24
Rehabilitation of patients with flaccid and spastic paralyses.	8	18
Errors and complications in traumatology and orthopedics.	4	10

ONCOLOGY
COURSE V
TERM 10
LECTURES 12
PRACTICAL CLASSES 56
CREDIT TEST 10 TERM

Modern problems in Oncology. Oncological service organization. Clinical groups of oncological patients. Causes of neglected disease. Palliative help to patient suffering from neglected forms of disease. Hospices.	1	4
Clinical symptom pathogenesis. Principles of malignant tumors diagnosis and treatment. Basic clinical symptoms. Factors, promoting the growth of tumors. Cancerogenes. Ecological aspects of cancerogenes circulation in environment.	2	4
Principles of malignant tumor treatment: medicinal therapy, chemotherapy, radial therapy.	1	24

Carcinoma of the skin, melanoma. Head and neck tumors.	2	-
Pre-cancer diseases and mamma cancer. The role of hormonal disturbances, patho-morphological characteristics, stages and metastasis and peculiar forms. Examination methods and principles of treatment.	2	8
Lung cancer. Clinics and histological structure, metastasis and stages. Early diagnosis and principles of treatment.	2	8
Digestive organ cancer, (oesophagus, stomach, large intestine and rectum, liver and pancreas). Patho-morphology, clinical picture, symptoms. Examination methods, diagnosis. Metastasis, principles of treatment.	2	12
Osteogenic sarcoma, sarcoma of soft tissues. Classification, Variety, clinical picture, principles of treatment, remote results.	-	6
Lymphogranulomatosis. Stages, forms and clinical picture. Differentiation of treatment principle. Results and prognosis.	-	4

OBSTETRICS & GYNECOLOGY

COURSE IV, V, VI

TERM 7, 8, 9, 10, 11, 12

LECTURES 130

PRACTICAL CLASSES 263

EXAMINATION TERM 8

Physiology of reproductive system. Menstrual cycle. Maternal passages and fetus. Biomechanism of labor in right occipitopubic-posterior, sacro-posterior position of the fetus and manual assistance in it. Gormonal changes in pregnancy. Neuro-hormonal and endocrinal induction factors and regulation of birth activity.	6	16
Organization of obstetrico-gynecological and in female dispensary. Structure and organization of the maternity hospital work. Methods of women in childbirth examination, Handling of the I, II, III periods of the delivery. Peculiarities of the deliveries in the primipara and multipara. Methods of examination in obstetrics: colposcopic, electro- and phonocardiography of the fetus, amnioscopy and amniocentesis, ultrasound examination, gormonal methods.	4	8
Perinatal protection of the fetus and child. Influence of the harmful factors on the fetus. Physiological neonatal and post-delivery period.	6	6
Late and early toxemia of pregnancy. Etiopathogenetic therapy. Classification of late toxemia. Early abortion, methods of delivery. Prophylaxis.	6	8
Non correct fetal position. Multiple pregnancy. Incompetent pregnancy and prolonged gestation. Frequency, causes, prophylaxis.	6	8
The abnormalities of pregnancy. Anatomically and clinically contracted pelvis. Classification. Particularities of the pregnancy and biomechanism of the delivery. Rational leading of the delivery. Methods of delivery.	6	8

Bleeding of the first and second part of the pregnancy. Afterbirth and delivery periods. Frequency, etiology, clinic, diagnostic. Outpatient treatment, hospitalization of the risk-group women.	6	8
Heart diseases, diseases of the endocrine system and kidneys and pregnancy. Contraindication for pregnancy. Planned hospitalization. Complex therapy. Indications for cesarean section.	8	4
Birth trauma of fetus and mother. Rupture of the uterus. Classification. Treatment.	2	2
Immunological incompatibles of mother and fetus.	2	4
Post-labor infectious diseases. Post-labor mastitis.	4	4
Operative methods of obstetrics. Cesarean section. Indications, contraindications, types of operations. Forceps and vacuum-extraction of the fetus. Indication and application. Analgesia. Obstetrics version. Extraction of the fetus. Fetus destroying operations. Types, indication and technique.	6	12
Family planning. Modern contraceptive methods. Abortion and extrauterine pregnancy.	4	4

COURSE V - GYNECOLOGY

Symptoms and diagnosis of gynecological diseases. Methods of examination of gynecological patients. Non-specific diseases of female genitals. Pathogenesis, classification of the inflammatory diseases, localization, form, type of provoker. Inflammation of the lower part (vulvitis, bartolinitis, colpitis and cervitis). Inflammation of the cervix. Salpingosphoritis. Parametritis. Pelvioperitonitis. Principles and method of treatment.	4	4
Specific inflammatory diseases of female genitals. Gonorea of different sections. Tuberculosis of the genitals. Differential classification, diagnostics, principles of treatment.	4	2
Dysfunctional uterus bleeding, amenorrhea and hypermenstrual syndrome. Classification, etiology, Pathogenesis. Basic forms of the diseases, clinic, investigation of the ovaries function, pituitary gonadotropic function. Principles and treatment.	2	4
Endometriosis: internal and external, extragenital Clinic, diagnosis. Treatment. Surgical and gormonal, indications, contraindications.	2	2
Tumors of genitals. Myoma of the uterine. Clinic, diagnosis, methods of treatment. Diseases of the uterus and uterine neck. General information about cancer. Pathomorphology and classification. Clinic, diagnostics, results.	6	4
Trophoblastic diseases. Clinic indications for chemotherapy. Combined methods of treatment.	2	4
Ovarian cyst and cystoma. Retentional ovary cyst. Non-retentional ovarian cyst. Benign cytoepitelian ovarian tumors. Teratoid, tumors, ovarian fibroma. Diagnostic, complications, treatment.	2	4
Malignant ovarian tumors. Cancer classifications. Clinical classification (4 stages). Complex treatment of malignant tumors (surgical, chemotherapy, hormonotherapy).	4	4

Hormonoproduktive ovarian tumors. Feminizing, muskulonizing tumors (androblastoms, lipido-cell). Classification, morphological characteristics. Differential diagnosis, treatment.	2	4
Nonproductive marriage. Female and male infertility. Absolute and relative infertility. Principles of treatment. Prophylaxis.	2	4
Anomalous position of genital organs. Uterine and ovary prolapse, uterine version. Clinic, diagnostic, surgical and conservative treatment.	2	2
Acute abdomen in gynecology. Causes: acute inner bleeding, acute disorder of the inner genital organs blood supply.	2	2
Extrauterine pregnancy. Localization. Clinic and diagnostics. Additional diagnostic methods. Treatment.	2	2

VI COURSE

Modern problems of perinatal medicine. Inborn and hereditary pathologies. Drug therapy and fetus. Fetus hypoxia.	4	5
Fetoplacental system. Diagnostic and treatment. Fetoplacental insufficiency.	2	-
Bleeding in afterbirth period. Acute aid. Causes. Risk group.	2	5
Pregnancy and extragenital diseases (diabetes mellitus, heart and kidney diseases). Anemia of pregnancy.	4	20
Modern treatment of inflammatory processes of female genital organs.	2	6
Trophoblastic disease.	2	2
Prophylaxis and early diagnostic of late gestosis. Diagnosis, Stages of rehabilitation after gestosis	2	32
Family planning. Modern contraceptive methods.	2	5
Clinic of deliveries. Abnormalities of deliveries. Contracted pelvis in modern obstetrics.	2	20
Delivery trauma of mother and child.	-	10
Tumors of female genital organs. Myoma. Endometriosis. Carcinoma of uterus. Ovarian tumors.	2	16
Extrauterine pregnancy. First aid.	2	16

INFANTILE DISEASES
COURSE IV, V, VI
TERM 8, 9, 11, 12
LECTURES 94
PRACTICAL CLASSES 242
EXAMINATION TERM 9

Pediatrics as one of the main subjects of education. The role of a doctor in the children's sanitation. The peculiarities of metabolism, physical and neuropsychological development of children. Natural, artificial and combined feeding. The role of nutrition in the deficit state correction. Hypo- and hypervitaminosis D. The peculiarities of skeletomuscular system. Rickets. Social aspects of the problem. Spasmophilia.	8	18
Physiology and pathology of newborns, perinatal pathology. Intracranial and labor trauma, hemolytic disease of newborns, the diagnosis, the principles of treatment, prophylaxis.	6	16
Pyo-septic diseases of new-borns. Etiology, pathogenesis, prophylaxis.	6	18
Peculiarities of children's blood, anemias of infants. Peculiarities of iron metabolism, the influence of copper and the other microelements.	6	18
Allergosis in children. Allergic diathesis. Classification, clinical picture, therapy.	6	16
The disease of bronchopulmonary system. Respiratory infections, classifications, treatment, prophylaxis. Pneumonias in infants. The principles of treatment and prophylaxis. Bronchial asthma. The principles of treatment, prophylaxis of allergic lesions of respiratory system.	6	18
Cardio-vascular diseases in children. Rheumatism. The peculiarities of pathogenesis and the clinical picture. Diagnostic criteria. Congenital heart diseases.	10	18
The diseases of kidneys in children. The anatomical and functional peculiarities of child's age. Acute renal insufficiency. Emergency therapy.	6	18
The pathology of gastro-intestinal tract (gastritis, ulcer, cholecysto-cholangitis).	6	18
Diseases of blood, leukosis. The peculiarities of leukosis in child's age. Hemorrhagic diathesis. The clinical picture, treatment, prophylaxis.	8	18
Endocrine diseases, congenital abnormalities of metabolism. Emergent therapy in diabetic and hypoglycemic coma, thyrotoxic crisis.	8	18
Children's infections. Scarlet fever, measles, whooping cough: etiology, pathogenesis, diagnosis. Complications.	10	30
Intestinal infections. The peculiarities of the clinical picture and diagnosis.	8	18

RADIO DIAGNOSIS.
RADIO THERAPY & ONCOLOGY
COURSE III, IV
TERM 6, 7
LECTURES 24
PRACTICAL CLASSES 48
EXAMINATION TERM 6,7

Roentgenoradiology. Historical comment. Modern equipment and measurement sources. Methods of investigation in roentgenology. Roentgenoscopy, roentgenography - advantages and disadvantages. Photoroentgenography, tomography, computer tomography, magnetoresonant tomography.	2	6
Roentgenological investigations of the lungs and cardiovascular system. Roentgenodiagnosis of lung tumors, mediastinum and pleural diseases. Diagnosis of valvular diseases (mitral, aortic, congenital).	4	12
Roentgenodiagnosis of diseases of gastrointestinal tract (diverticulums, cardiospasm cancer) stomach (cancer and ulcer symptoms), of large and small intestine, liver, pancreatic gland and kidneys.	2	6
Roentgenodiagnosis of bone and joint diseases. Age peculiarities. Roentgenosemiotics of bone injuries and diseases. Traumatical injuries, inflammatory diseases, tumors. Roentgenological symptoms. Roentgen anatomy of teeth and jaws. Diagnosis of anomaly of development of teeth, jaws and paradonts.	4	6
Basis of radiology. Natural and artificial radioactivity. Biological effect of ionizing radiation. The use of radionuclides in diagnosis and treatment. Opportunities of radioactive indication method. Principles of radiometric investigation of thyroid, liver, kidneys. Scanning as a method of diagnosis of the diseases of lungs, liver etc.	2	6
Principles of radial therapy of tumoral and non-tumoral diseases. Radial, combined and complex therapy of malignant tumors.	2	10
Methods of radial therapy of malignant neoplasms variously localized (skin, larynx, lungs, rectum, mammary gland).	2	6
General and local radial reactions and radial therapy complications, their prevention and treatment.	-	2

INFECTIOUS DISEASES
COURSE V, VI
TERM 9, 10, 11, 12
LECTURES 70
PRACTICAL CLASSES 230
EXAMINATION TERM 10

Chollera. History. The peculiarities of different forms. System of hospitalization, differential diagnosis, treatment.	2	4
Meningococcal infection. Infectious mononucleosis, diphtheria. Today state of the problem. Peculiarities of the diseases, clinical forms and diagnosis of typhus. Treatment of the disease. Description of patient and case history. The rules of discharging.	8	14
Arboviruses diseases. Virus hepatitis, grippe and other acute respiratory infections. Etiology, epidemiology, pathogenesis. Differential diagnosis. Prophylactics and treatment Description of patients and case histories Prophylactic medical examination.	8	-
Brucellosis, plague, tularemia, earsiniosises. History, etiology, peculiarities of epidemiology, pathogenesis. The role of ill animals in transmission of the infection. Clinical forms. Modern principles in treatment, differential diagnosis, laboratory diagnostics. Treatment, prophylaxis, criteria of discharging.	4	-
Malaria, history, main types of infection agents. Cycle life of malaria plasmodium. Epidemiology, pathogenesis, clinic classification. Atypical forms of the disease. Treatment, criteria of discharging. Systematic prophylactic observation.	2	4
Erisipelas. Description of the patients, differential diagnostics, treatment	-	2
Leptospirosis. Clinical management of patients in case of the absence of such a patient-the discussion of case histories from the archive. The problems of diagnosis, differential diagnosis, treatment.	-	2

Introductory classes. Instruction of activity in infectious stationary. The rules of making case history and in-time examination of the infectious patient in order to make the correct diagnosis. Curation of the patient, the work in reception ward.	-	62
Early differential diagnostics of infectious diseases of fever, eczemas, diarrhea, jaundice.	-	18
Early differential diagnostics of the dermal integument.	-	2
Children's infections in the adults.	-	2
Shocks in infectious clinics and their intensive therapy.	-	2
Drug diseases.	-	2
The work in the cabinet of infectious diseases in polyclinic.	-	8
Clinical anatomical conference. Discussion of case histories with lethal outcome, caused by infectious diseases.	-	3

Introduction in the course of Infectious diseases. History. The method of treatment of Infectious diseases. The structure and the working process of infectious clinics.	2	2
Abdominal typhoids and paratyphoids A and B. Salmonellosis, alimentary toxicoinfections, staphylococcus, alimentary toxicosis. Botulism, dysentery, protozoan colitis. History, etiology, epidemiology, pathogenesis. Clinic of different forms of diseases. Methods of diagnostics. Treatment, prophylaxis. The description of a patient and medical case-histories. Collecting the anamnesis.	8	13

**TROPICAL DISEASES
COURSE VI
TERM 12
LECTURES 26
SEMINARS 168
CREDIT TEST TERM 12**

Peculiarities of general pathology of the Tropical countries. General epidemiology of the tropical parasites.	2	4
Peculiarities of clinical picture and epidemiology of the virus infections in tropical countries.	6	40
Arbovirus diseases (fevers, encephalomyelitis, hemorrhagic fever, mosquito, zoonotic)	-	-
Virus hepatitis (A,B,C,D,E).	-	-
Enterovirus (poliomyelitis).	-	-
Virus diarrhea diseases.	-	-
Herpetic diseases (herpes, chickenpox etc.).	-	-
Measles, rubella, natural pox.	-	-
HIV-infection and AIDS in tropical countries.	2	8
Rickettsial (epidemic typhus, Q-fever, tsutsugamushi disease)	2	8
Bacterial infections in tropical countries (cholera, salmonellosis, botulism, plague, tularemia, leptospirosis).	-	20
Non-venereal treponematosis (frambesia etc.), chlamydiosis, legionella.	-	16
Tropical protozoan diseases (malaria, toxoplasmosis, leishmaniasis, amebiasis etc.).	-	34
Helminthiasis on tropical countries (schistosomiasis, apistarchosis, nematodiasis etc).	2	26
Diseases, caused by venomous animals and plants.	-	4
Urgent states at infectious and parasitic diseases in tropical countries.	-	8
Pathologic peculiarities of liver, circulatory system diseases, eyes, deep mycoses, tuberculosis in tropical countries.	10	-
Actual problems of children pathology in tropical countries.	2	-

**SKIN and VENEREAL DISEASES
COURSE IV,
TERM 7, 8
LECTURES 36
PRACTICAL CLASSES 74
EXAMINATION TERM 8**

Subject of dermatology, its historical data, deontology in dermatology. The anatomy and histology of normal skin. Skin infrastructure, anatomy and histology of the skin appendages. Its participation in metabolic processes, age peculiarities in skin physiology. Main skin pathophysiological processes. Skin diseases semiotics.	2	6
Pyo-inflammatory skin diseases. Determination of pyoderma classification (groups of superficial and profound forms). Principles of treatment, necessity of individualization, pyoderma prophylaxis in industry and agriculture. Scabies: Pathogenesis, epidemiology, clinical picture, treatment.	2	6
Fungus skin diseases, biopathological properties. Classification of dermatomycoses.	6	12
Dermatitises. Eczema. Neurodermite. Neurogenic and allergic theory of eczemas. Individual therapy. Diffuse diseases of connective tissue: lupus erythematosus, scleroderma. Dermatomyositis and periarteritis nodosa.	6	12
Skin tuberculosis. Leprosy. Borovskiy disease. Etiopathogenesis. Clinical picture, laboratory diagnosis methods. Treatment and prophylaxis methods. Occupational skin diseases. Differential diagnostics.	4	12
Syphilis. Modern study of syphilis pathogenic agent. Methods of investigation of treponema pallidum. Conditions and ways of infection. Initial period of syphilis. Latent period. Clinical picture, histopathology, syphilitic bubo, lymphangitis. Laboratory investigations. Secondary syphilis. Clinical characteristics of secondary syphilides, their pathomorphosis. Tertiary syphilis. Clinical peculiarities of tertiary syphilides, differential diagnosis. Serologic tests significance. Hereditary syphilis, pathogenesis, clinical picture, Hutchinson's triad. Hereditary syphilis prophylaxis. Treatment, prevention.	10	14
Clinical picture, treatment of gonorrhoea. Biology and morphology of pathogenic agent. Source of infection, latent period. Classification of male gonorrhoea. Clinical picture. Gonosepsis and gonarthrit. Gonorrhoea in infants. Principles of treatment. Curability criteria. Individual and public prophylaxis.	4	12

NERVOUS DISEASES WITH MEDICAL GENETICS AND NEUROSURGERY

COURSE III, IV, V

TERM 6, 7, 8

LECTURES 48

PRACTICAL CLASSES 111

EXAMINATION TERM 8

CREDIT TEST TERM 6

Neurology in medical education. Systemic movement organization. Pyramidal system. The main impairments of movement functions. Flaccid and spasmatic paralysis. Methods of investigation of movement sphere. Extraparalymidal system. Function impairment symptoms. Cerebellum. Coordination of movements and ataxia.	4	10
Doctrine of function localization in the brain. Symptoms of the highest cortical functions impairment (aphasia, agnosia, apraxia).	2	9
Cerebrocranial nerves. Symptoms of the lesion. Surface and deep sensibility. Symptoms of sensitive tract lesion at different levels.	2	10
Vegetative nervous system. Hypofhalamic area, sympathetic and parasympathetic section. Ways of the investigation of vegetative functions.	2	4
Topical diagnosis of focal lesions of the nervous system at different levels. Syndromes of the lesion of cortical and truncal parts of the brain. Ways of investigation.	4	12
Infectious diseases of the nervous system. Nozologic forms (etiology, clinic diagnosis, treatment, validity examination). Meningitises, serous and tuberculosis meningitises. Cerebral abscesses. Encephalitis, myelitis: poliomyelitis, multiple sclerosis.	8	12
Vascular diseases of the nervous system. Transient cerebral circulation lesions. Insults: ischemic, hemorrhagic. Differential diagnosis, resuscitation measures.	4	12
Tumors of the nervous system. Classification, clinic, focal and general cerebral symptoms.	2	8
The basis of the medical genetics. Hereditary diseases of the nervous system. Genic and chromosome mutations. Mutagenous factors. Chromosome diseases.	14	20
Closed craniocerebral trauma and closed vertebral trauma. Diseases and traumas of the peripheral nervous system. Vertebral osteochondrosis. Epilepsy. Focal and Jacksonal epileptic seizures.	6	14

PSYCHIATRY

COURSE V

TERM 9, 10

LECTURES 34

SEMINARS 55

EXAMINATION TERM 10

The subject of psychiatry. The main conceptions. Oligophrenia, etiology, form, treatment, forensic psychiatric examination.	2	7
Psychopathy, neurosis. Etiology, pathogenesis, forms, treatment, prophylaxis. Forensic psychiatric examination.	6	12
Involuntional psychosis. The conception, clinical picture, forms of course, treatment, forensic psychiatric examination.	4	4
Organic brain lesions, schizophrenia, the conception, forms, etiopathogenic mechanisms of development, clinical picture, treatment, psychiatric examination.	4	12
Traumas. Cerebro-vascular diseases. Different periods of craniocerebral traumas. Treatment, psychiatric examination.	4	4
Narcology, alcoholism. Alcoholic psychosis, narcomania, toxicomania. Etiopathogenesis. The clinical picture, treatment, prophylaxis.	6	8
Epilepsy, reactive psychosis. Etiopathogenesis, the clinical picture. Treatment, psychiatric examination.	6	4
The basic methods of treatment in psychiatry. Medicamentous and non-medicamentous methods of treatment Complications in the treatment of neuroleptics. The methods of emergency therapy.	2	4

OTORHINOLARYNGOLOGIC DISEASES (ENT-DISEASES)

COURSE IV

TERM 8

LECTURES 24

PRACTICAL CLASSES 44

EXAMINATION TERM 8

Clinical anatomy and physiology of nose and sinuses, pharynx and larynx. Upper respiratory track examination. Procedure, methods, testing.	2	4
Clinical anatomy and physiology of ear. Theories of hearing. Physiology of vestibular apparatus. Examination procedure. Methods, testing.	1	4
Nose functions (respiratory, swelling), methods of studying. Hearing function, methods of testing, by the speech, tuning forks. Testing of the eustachion tube permeability.	1	4
Nose and sinuses diseases. Acute and clinical rhinitis, Acute and chronic sinusitis. Orbital and intracranial complications. Benign and malignant tumors. Diagnostics and treatment.	4	4
Pharyngeal diseases. Acute and chronic tonsillitis, trivial quinsies and quinsky in infectious or blood diseases. Acute and chronic pharyngitis. Pharyngeal tumors -benign and malignant. Principles of diagnostics and treatment.	4	5
Laryngeal diseases. Laryngeal innervation disturbance, acute and chronic laryngitis. Catarrhal or membranous croup. Laryngeal tuberculosis and scleroma, Wegener's granulomatosis. Upper respiratory way involvement in AIDS.	2	5
Laryngeal tumors: benign and malignant. Differential diagnostics. Tumorous stenosis. Treatment.	2	4
Critical conditions and aid in otorhinolaryngology traumas of the nose and sinuses, foreign bodies in ENT-organs and bronchi; nasal hemorrhages and their arrest; esophagus burns, tracheotomy.	2	6
Ear diseases. External ear lesions: otocleisis, furuncles and auditory passage abscess. Acute tempanitis and secretory otitis media. Etiopathogenetic features, stages of clinical development, outcomes, complications. Chronical purulent otitis media. Current methods of diagnostics and treatment. Intracranial complications. Deafness and deafmetism.	6	8

OPHTHALMOLOGY
COURSE V
TERMS 10
LECTURES 24
PRACTICAL CLASSES 44
EXAMINATION 10 TERM

Introduction into ophthalmology. Historical data. Anatomy, physiology of various eye organs. Basic eye functions. Central and peripheral vision, methods of investigation. Colour perception and colour sensation. Colour sensation anomaly. Eye refraction. Accommodation. Accommodation pathology. Clinic of various types of ametropia, their correction. Myopia, its complications and prophylaxis. Strabismus and its types, treatment and management by investigation method.	4	6
Conjunctiva pathology. Conjunctivitis. Catarrhal, acute, purulent, adenovirus, non-infectious. Etiology, clinical picture, treatment.	4	4
Corneopathology. Classification of keratitis: purulent, herpetic, interstitial, parenchymatous, mycotic, creeping ulcer. Etiology, clinical picture, treatment. Role of congenital syphilis in parenchymatous keratitis. Keratoplasty.	4	6
Glaucoma. Classification. Clinical picture, ways of intereye fluid discharge. Drainage system of eye. Methods of early diagnosis. Tonography gonioscopy. Etiopathogenesis of primary glaucoma. Methods of treatment, miotics and drugs stimulating nutrition of retina and optic nerve. Acute glaucoma attack, its arrest.	4	6
Eyelid diseases. Pathology of lachrymal organs. Blepharitis, hordeolum, eyelid abscess. Etiology, clinical picture, treatment, consequences of muscle diseases: theos, lagophthalm, blepharospasm. Dacryocystitis, its clinical picture and treatment.	4	6
Vessel tract pathology. Geritits. Iridocyclitis. Etiology, clinical picture, complications, treatment.	4	6
Lens pathology. Age peculiarities. Cataracts, their classification. Operative treatment.	4	4
Trauma of eye organ. Impairment classification. Mechanical impairments. Foreign bodies, penetrating wounds. First aid. Complications. Industrial trauma prophylaxis. Burns. Their classifications. Eyelid skin burns, burns of iris, cornea, eyefundus. Acute radial impairments. General eye pathology. Thrombosis of central artery and retina vein. Angiopathy, angio-sclerosis, retinopathy in hypertensive disease, diabetes mellitus, toxicosis of the pregnant. Chorioretinitis. Optic neuritis. Military and labour expertise. Clinical picture, outcome, treatment. Eye invalidism group.	4	6

FORENSIC MEDICINE
COURSE VI
TERM 11
LECTURES 26
PRACTICAL CLASSES 58
EXAMINATION TERM 11

Introduction into forensic medicine. Medicolegal classification of the body injuries. Russian law legislation and criminal action. Processing and organizing the basis of the forensic medical examination. The volume of the forensic medical examination, the causes of the examinations, methods of examination.	2	6
The questions of the general and forensic medical tanatology. Dying and death. Cadaverous changes. Determination of the date of death. Hypoxia and asphyxia in forensic medicine.	4	8
Forensic traumatology. Body injuries. Classification according to the type of arms. Determination of the life and postmortem trauma.	4	6
Forensic medical examination of the transport trauma (automobile and railway). Falling from the height, conditions and morphological characteristics. Examination of the incident place.	4	8
Examination of the fire-arms' injuries.	4	6
Debatable sexual conditions and sexual crimes. Forensic medical examination of the newborn corpses. Determination of the maturity, vivacity of the fetus.	2	8
Forensic medical proofs of the beginning of death, caused by the poisoning substances. Characteristic changes caused by the alcohol intoxication.	4	8
Forensic medical examination of the material evidence. Forensic examination of mechanical injuries. Laboratory methods of the examination.	2	8