

**Ukrainian Ministry of Health  
Gorky Donetsk National Medical University**

Form U-3.02

**APPROVED**

Deputy Rector for  
Educational Procedures

\_\_\_\_\_ by Prof. A.N. Talalaenko  
The “ \_\_\_ ” of \_\_\_\_\_ 2011

**COURSE SYLLABUS**

in the Internal Medicine

Intended specialities - 7.110106 "Dentistry"

Faculty - Dentistry

Department of Propedeutics and Internal Medicine

Course Data

Type of Education	Years of Study	Terms	Credit	Hours			
				TOTAL	Classes at University		Self-Training
					Lectures	Practices	
Full-time	II-IV	IV-VII	8,5	255	46	140	69

Developed by National Associate Member Academy of Medical Science of Ukraine,  
Professor G.A. Ignatenko, Associate Professor G.S. Taktashev

The Course Syllabus was considered at the Department Staffs session held on the \_\_\_ of June 2011 Minutes #

Head of the Department

of Propedeutics and Internal Medicine \_\_\_\_\_ Professor G.A. Ignatenko

The Course Syllabus was approved at the Commission Board's session held on  
the \_\_\_ of \_\_\_\_\_ 2011

Minutes #

Head of the Commission Board Professor \_\_\_\_\_ N. B. Gubergrits

Course syllabus was created on a basis of typical program for students of 2-5 courses of dental faculty of high education facilities of III-IV levels of accreditations which are work on the basis of credit-module system according to the requirements of the Bologna declaration "propedeutic of internal diseases, internal diseases, medicine of emergencies, emergency and urgent care", Kiev-Poltava, 2010, approved by educational, scientific and informational-analytic unit of Ministry of Public Health Ukraine from 2010.

## EXPLANATORY NOTE

The syllabus for the course of internal medicine is intended for higher medical educational establishments of Ukraine of III-IV levels of accreditation and structured for specialties 7.110106 Dentistry of the preparatory course "Medicine" in accordance with Educational Qualificatory Characteristics (EQC) and Educational Professional Programmes (EPP) of preparation of specialists approved by the Order of the Ministry of Public Health of Ukraine dated 07.12.2009 No 929 and the Experimental Syllabus structured on the principles of the European credit-transfer system(ECTS).

In accordance with the syllabus, the course of internal medicine is to be studied in IV-VII terms when a student already possesses fundamental knowledge on such basic disciplines as propedeutics of internal disease, medical biology, medical and biologic physics, human anatomy, physiology, bioorganic and biologic chemistry, which the syllabus for "internal medicine" is integrated with. The course of internal medicine, in its turn, helps to form the principles of the study of human organism as comprehensive whole, deal with questions of interrelationship of pathology of oral cavity and internal organs. Determine skills of clinical examination and providing of first aid for patient in department and in emergencies.

The process of study is arranged on the basis of a credit-module system according to the requirements of the Bologna declaration. In accordance with the Syllabus for preparation of specialists, the course "Internal medicine" is to be covered within 8,5 credit hours (255 hours), 186 of which are intended for classroom work (lectures - 46 hours, practice classes – 140 hours) and 69 hours-for students' self-training activity. The syllabus for the course is structured into two modules including groups of topic-based modules. The whole amount of a studying load is presented in ESTC credits which are accumulated by a student in case of his successful mastering a corresponding module.

The syllabus for the course "Internal medicine" is planned into two modules:

**Module 1** "Basis of internal medicine and disorders of: respiratory, cardiovascular, urinary, alimentary system, rheumatic diseases"

1. Respiratory diseases
2. Cardiovascular diseases
3. Rheumatic diseases
4. Alimentary system disorders
5. Urinary system disorders

**Module 2.** "Basis of internal medicine and disorders of: blood, endocrine, immunological, allergic"

1. Endocrine and metabolic disorders
2. Blood disorders
3. Immune system disorders in dentistry practice, allergic disorders, secondary immunodeficiency

By the Syllabus, the process of study includes lectures, practice classes, students' self-training activity. Practice classes, lasting 2 academic hours each, are carried out in a therapeutic hospital and comprise 4 structural parts: 1) learning a theoretical material on a subject, 2) showing students methods and techniques of a patient examination (performed by the instructor), 3) students' work at a patient's bed under the instructor's supervision aiming at practicing necessary skills, 4) carrying out situational tasks and students' testing.

As far as a practice class is concerned, its considerable part is to be devoted to methods of a physical examination at a patient's bed. A great deal of attention in the syllabus is traditionally devoted to peculiarities of communication with a patient and ability to collect anamnestic data. In accordance with the traditions of the domestic therapeutic school, the methods of a patient examination, palpation, percussion, and auscultation are fully presented in the syllabus. The part devoted to modern instrumental and laboratory methods of investigation is considerably extended. Clinical thinking and skills in making a proper diagnosis based on syndromes identified are formed in a student on the grounds of mastering clinical methods of a patient examination, ability to interpret, assess and analyze them, understand principles of the study of human organism as comprehensive whole, deal with questions of interrelationship of pathology of oral cavity and internal organs which, in the end, is the main goal of internal medicine course. To develop skills of a rapid examination and providing of first aid for patients in pre-admission stage and in emergencies. Oral cavity in tightly connects with different internal organs and systems. Some internal organs disorders manifests with a symptoms which frequently can be detected on mucus membranes of oral cavity and that is force of the patient to come to dentist.

Besides this in dental practice it is possible to appear of some emergencies which caused by pathology of internal organs. So tactic which will be used by dentist may become a critical factor of patient's health.

The lecture course presupposes the lecture material presentation supported by an extensive use of various didactic means, such as multimedia presentations, educational films, slides, tape recordings, demonstration of patients. The lecture and practice courses are structured so, as far as possible, that lecture material precedes practice classes.

Students' self-training activity occupies a significant part of the course. In addition to a traditional classroom and extracurricular work, students' study of theory questions on internal medicine includes their work in departments of a therapeutic hospital, clinical laboratories and departments of functional diagnostics after classes. Efficiency of this work is to be provided by the teachers as well as support personnel of the faculty department of internal medicine. Students' self-training activity also includes curation of patients with a further drawing up a case history.

**Student's work** is checked on a regular basis at practice classes according to specific goals. The process of assessing student's work is performed during two constituent parts of a lesson: theoretical and practical. Depending on the character of activity, the following means of determining students' level of preparation are used: computer tests, situational tasks, checkup of practical skills by methods of carrying out a patient examination with a further interpretation of the data obtained, analyzing and assessing results of instrumental, laboratory investigations and treatment.

**Final check of mastering the material of the modules** is performed on their completion at final module classes. Student's mark on study and discipline results is considered to be a rating one and is given according to the multi-grade scale as an arithmetic mean mark of mastering corresponding modules and is calculated by the system ESTC as well as by the traditional scale, accepted in Ukraine.

According to the ESTC scale, if a student wants to make his/her results in the subject better, a final testing is performed in accordance with normative documents and on extra time-table, approved in a higher educational establishment.

Type of Education	Hours				Years of Study	Terms
	TOTAL	Classes at University		Self-Training		
		Lectures	Practices			
	255/8.5	46	140	69	II-IV	
Module 1	165/5.5	30	90	45	II-III	Current and final module control: - test- Control of practical skills –analysis of instrumental examination results
Including final module control of module	6		4	2	3	final module control (standardized)
Module 2	90/3.0	16	50	24	4	Current and final module control: - test- Control of practical skills –analysis of instrumental examination results
Including final module control of two modules	6		4	2	4	final module control (standardized)

## Module-Based Syllabus for the Course

Subject	Total Hours	Classes at University		Self-Training Hours	Years of Study	Type of controls
		Lectures	Practises			
Total	255/8.5	46	140	69	24	
<b>Module 1. Basis of internal medicine and disorders of: respiratory, cardiovascular, urinary, alimentary system, rheumatic diseases</b> Modul's goals: 1. To demonstrate the skills of moral-deontological principles of medical specialist and principles of professional deference to rank in a clinic. 2. To demonstrate the skills of inquiring, objective and instrumental examination of patients and analyze the results. 3. To demonstrate the skills of analyze the results of basic laboratory and instrumental methods of examination of patients with somatic diseases which need the special tactic of care of stomatological patient. 4. To demonstrate the skills of determination of the leading syndromes and symptoms in the clinic of internal medicines. 5. To discover and identify the signs of internal diseases in the cavity of mouth. 6. To care for the sick patients. To perform before-doctor help at main urgent conditions in the clinic of internal illnesses.	165/5.5	30	90	45	2-3	
<b>Content modules:</b>						
<b>Content module 1 RESPIRATORY DISORDERS</b> Concrete goals: - Master main principles of patient examination with respiratory disorders - summarise results of examination of patient and maintain diagnosis - interpret interrelation between somatic pathology and oral cavity disorders - master of general principles, prevention and providing help in emergencies	34	4	14	16	2	Current control as a fulfillment of different tasks: multiple choices tests. Tests of constructive builds
<b>1.1 Respiratory failure.</b> Dental aspects of respiratory disorders. First aid principles. Acute respiratory failure: causes and first aid. Pneumothorax. Asphyxia. Pulmonary oedema. Basis of biosafety and bioethics. Legal and medicosocial aspects of regulation of public health system on the basis of bioethics. Government control of biomedical intervention, vaccinal prevention. Bioethical problems, demography crisis and ways of solutions.						

<p><b>1.2 COPD</b> - etiology, pathogenesis, clinical presentation, treatment, prevention. Differential diagnostics. Bronchial obstructive syndrome. <b>Pulmonary emphysema</b>. Dental aspects. Rehabilitation and vocational guidance.</p>					
<p><b>1.3 Bronchial asthma</b> - definition, classification, etiology, pathogenesis, clinical presentation, complications, diagnostic tests, treatment, prevention. <b>Asthmatic Exacerbation</b> in dental office - triggering agents, diagnosis, emergency medical treatment, prevention. The conception of <b>Status Asthmaticus</b>. Oral health changes in patients with asthma. Dental management considerations for patients with asthma. Rehabilitation and vocational guidance.</p>					
<p><b>1.4 Pleurisy</b> - definition, etiology, pathogenesis, clinical presentation, comparison of pleural exudate and transudate, treatment, prevention. Dental aspects.</p>					
<p><b>1.5 Pneumonia</b> - definition, etiology, pathogenesis, clinical presentation, complications, diagnostic tests, treatment, prevention. Oral health changes in patients with pneumonia. Dental management considerations for patients with pneumonia. Dental aspects.</p>					
<p><b>1.6 Lung Pyogenic Infections. Bronchiectasia</b> - definition, etiology, pathogenesis, clinical presentation, complications, diagnostic tests, pharmacologic therapy and surgical intervention, prevention. <b>Lung Abscess</b> - definition, etiology, pathogenesis, clinical presentation, complications, diagnostic tests, pharmacologic therapy, indications for surgical intervention, prevention. The conception of pulmonary gangrene. Oral health changes in patients with lung abscess. Dental aspects.</p>					
<p><b>1.7 Lung Cancer</b> - current concepts of carcinogenesis, etiology, classification, clinical presentation, diagnostic tests, treatment, indications for surgical intervention, prevention. Oral health changes in patients with lung cancer. Dental management considerations for oncology patients receiving radiation therapy (by the example of patients with lung cancer). Dental aspects.</p>					
<p><b>Content module 1 Cardiovascular disorders</b> Concrete goals: - Master main principles of patient examination with cardiovascular disorders - summarise results of examination of patient and maintain diagnosis - interpret interrelation between somatic pathology and oral cavity disorders - master of general principles, prevention and providing help in emergencies</p>	42	10	22	10	2-3 Current control as a fulfillment of different tasks: multiple choices tests.

<p><b>2.1 Arterial hypertension</b> - definition, classification, pathogenesis, conception of target organ damage, clinical presentation, treatment. <b>Essential (Primary) Hypertension</b> - definition, classification, etiology, treatment, prevention. Oral health changes in patients with hypertension. Dental management considerations for patients with hypertension. Managing the care of patients with hypertension related to blood pressure level and the health status. The role of dentists in patient education about hypertension. Modification of risk factors.</p>						<p>Tests of constructive builds</p>
<p><b>2.2 Secondary Hypertension</b> - definition, classification, pathogenesis, conception of target organ damage, clinical presentation, treatment. Oral health changes in patients with hypertension. Dental management considerations for patients with hypertension. Managing the care of patients with hypertension related to blood pressure level and the health status. <b>Hypertensive crises. Hypertensive Urgency and Emergency</b> in dental office — high risk patients, triggering agents, diagnosis, urgency and emergency medical treatment, prevention. The role of dentists in patient education about hypertension. Modification of risk factors.</p>						
<p><b>2.3 Atherosclerosis</b> - definition, etiology, mechanisms of atherosclerotic plaque development, natural history, prevention. The current findings regarding the association between periodontal disease and atherosclerosis. <b>Coronary Heart Disease (CHD)</b> - etiology, pathogenesis, clinical forms, classification. <b>Chronic CHD</b> - classification, pathogenesis, clinical presentation, investigatory techniques, treatment, prevention. The role of dentists in patient education about atherosclerosis and experiencing CHD events. Modification of risk factors.</p>						
<p><b>2.4 CHD. Angina Pectoris</b> in dental office – clinical forms, triggering agents, diagnosis, emergency medical treatment, prevention. <b>Unstable angina.</b> Oral health changes in patients with chronic CHD. Dental management considerations for patients with chronic CHD.</p>						
<p><b>2.5 Acute coronary syndrome.</b> Definition, classification, treatment. <b>myocardial infarction.</b> Definition, pathogenesis, classification, typical and atypical clinical forms, diagnostic complications, ECG changes. Dental aspects.</p>						
<p><b>2.6 Acute myocardial infarction.</b> Treatment, complications, emergency, diagnostic, classification. Cardiogenic shock. Myocardial infarction in dental office. High-risk group. Provoking factors. Diagnosis, emergency, treatment, prevention.</p>						
<p><b>2.7 Sudden cardiac death.</b> Ventricular fibrillation, asystoly, cardiopulmonary resuscitation. Sudden cardiac death in dental office. High-risk group. Provoking factors. Diagnosis, emergency, treatment, prevention.</p>						

<p><b>2.8 Heart Failure. Acute Heart Failure.</b> Acute heart failure in dental office. High-risk group. Provoking factors. Diagnosis, emergency, treatment, prevention.</p> <p><b>Pulmonary thromboembolism.</b> Definition, Risk factors, pathogenesis, diagnosis, emergency, treatment, prevention.</p> <p><b>Chronic Heart Failure</b> - definition, etiology, pathogenesis, classification, clinical presentation, treatment, prevention.</p> <p><b>Cor pulmonary,</b> etiology, pathogenesis, classification, clinical presentation, treatment, prevention. Peculiarities of dental tactics in patient with heart failure.</p>						
<p><b>2.9 Arrhythmias. Extrasystoly. Paroxysmal Supraventricular Tachycardia</b> in dental office - high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention.</p> <p><b>Paroxysmal Ventricular Tachycardia</b> in dental office - high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention.</p>						
<p><b>2.10 Atrial Fibrillation and Atrial Flutter</b> in dental office - etiology, pathogenesis, classification, clinical presentation, treatment, high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention. Dental tactics in patients who takes aspirin or oral anticoagulants.</p> <p><b>Heart blocks. Third-Degree Atrioventricular Block, Morgagni-Adams-Stokes syndrome</b> in dental office - high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention. Dental management considerations for patients with arrhythmias.</p>						
<p><b>2.11 Arterial Hypotension. Acute vascular failure. Syncope, collapse, shock</b> - definition, etiology, pathogenesis, classification, clinical features, diagnostic, treatment, complication, prognosis, emergencies, high-risk group, prevention</p>						
<p><b>Content module 3. Rheumatic Disease.</b> Concrete goals: Master main principles of patient examination with rheumatic disorders - summarise results of examination of patient and maintain diagnosis - interpret interrelation between somatic pathology and oral cavity disorders - master of general principles, prevention and providing help in emergencies</p>	36	6	24	6	3	Current control as a fulfillment of different tasks: multiple choices tests.
<p><b>3.1 Rheumatic Disease. Acute Rheumatic Fever. Chronic Rheumatic Disease.</b> Definition, etiology, pathogenesis, classification, clinical features, diagnostic, treatment, complication, prognosis, emergencies, high-risk group, prevention, dental aspects, Role of dentist in prevention and treatment.</p>						Tests of constructive builds

<p><b>3.2 Infective Endocarditis</b> - definition, etiology, pathogenesis, classification, clinical presentation, diagnostic tests, treatment, prevention. Oral health changes in patients with infective endocarditis. Dental management for patients with infective endocarditis. The role of dentists in prevention of infective endocarditis - cardiac conditions requiring antibiotic prevention, preventive regimens for dental and oral procedures.</p>					
<p><b>3.3 Acquired Valve Disease.</b>  <b>Mitral Regurgitation, Mitral Stenosis</b> etiology, hemodynamics, clinical presentation, diagnostic tests, general approach to treatment, indications for surgery, prevention.  <b>Aortic Regurgitation, Aortic Stenosis</b> - etiology, hemodynamics, clinical presentation, diagnostic tests, general approach to treatment, indications for surgical intervention, prevention.  Dental management of patients with acquired valve disease.</p>					
<p><b>3.4 Systemic connective tissue disorders.</b> definition, etiology, pathogenesis, classification, clinical presentation, diagnostic tests, treatment, prevention. Dental manifestation.  <b>Systemic sclerosis:</b> definition, etiology, pathogenesis, classification, clinical presentation, diagnostic tests, treatment, prevention. Dental manifestation. <b>Raynaud's Syndrome:</b> definition, etiology, pathogenesis, classification, clinical presentation, diagnostic tests, treatment, prevention. Dental manifestation. <b>Sjogren's Syndrome:</b> definition, etiology, pathogenesis, classification, clinical presentation, diagnostic tests, treatment, prevention. Dental manifestation. <b>Rheumatoid Arthritis:</b> definition, etiology, pathogenesis, classification, clinical presentation, diagnostic tests, treatment, prevention. Dental manifestation. <b>Systemic Lupus Erythematosus:</b> peculiarities of dental tactics for patient who take systemic corticosteroid treatment. Definition, etiology, pathogenesis, classification, clinical presentation, diagnostic tests, treatment, prevention. Dental manifestation. <b>Systemic vasculitis:</b> definition, etiology, pathogenesis, classification, clinical presentation, diagnostic tests, treatment, prevention. Dental manifestation.</p>					
<p><b>Content module 4. Gastrointestinal Disease.</b>  Concrete goals:  Master main principles of patient examination with gastrointestinal disorders  - summarise results of examination of patient and maintain diagnosis  - interpret interrelation between somatic pathology and oral cavity disorders  - master of general principles, prevention and providing help in emergencies</p>	24	6	12	6	3 Current control as a fulfillment of different tasks: multiple choices tests.



<p><b>4.1 Gastritis</b> - definition, etiology, pathogenesis, classification, clinical presentation, diagnostic tests, treatment. Oral health changes in patients with gastritis. The role of dentists in prevention of gastritis caused by drugs or chemicals. <b>Peptic Ulcer Disease</b> - definition, etiology, pathogenesis, clinical presentation, diagnostic tests, complications, pharmacologic therapy, indications for surgical intervention. Oral health changes in patients with peptic ulcer disease. Dental implications of Helicobacter pylori. The role of dentists in prevention of peptic ulcer disease.</p> <p><b>Chronic disease of intestine. Chronic enteritis.</b> definition, etiology, pathogenesis, classification, clinical presentation, diagnostic tests, treatment. Inflammatory diseases of colon (<b>Crone disease, ulcerative colitis</b>). Risk factors, pathogenesis, clinical manifestation, treatment, prevention. Chewing disorders and it's role in a development of alimentary disorders.</p>						Tests of constructive builds
<p><b>4.2 Pancreatitis</b> - etiology, pathogenesis, clinical presentation, complications, diagnostic tests, treatment, prevention. Oral health changes in patients with chronic pancreatitis. The role of dentists in patient education about chronic pancreatitis. <b>Gallstone Disease</b> - etiology, pathogenesis, clinical presentation, complications, treatment, prevention. Mechanical jaundice, diagnostic and differential diagnostic.</p> <p><b>Biliary (Hepatic) Colic</b> in dental office - high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention.</p> <p><b>Chronic Hepatitis</b> - definition, etiology, clinical presentation, treatment, prevention. <b>Liver cirrhosis.</b> Dental aspects. Safety rules in treatment of patients with a hepatitis B,C,D.</p> <p><b>Emergence in case of hepatic coma, oesophageal bleeding, severe ascitis.</b></p>						
<p><b>Content module 5. Renal Disorders.</b> renal goals: Master main principles of patient examination with renal disorders - summarise results of examination of patient and maintain diagnosis - interpret interrelation between somatic pathology and oral cavity disorders - master of general principles, prevention and providing help in emergencies</p>	23	4	14	5	3	
<p><b>5.1 Pyelonephritis, Urolithiasis, Main Syndroms</b> - definition, etiology, pathogenesis, classification, clinical presentation, diagnostic tests, treatment, prevention. Importance of nidus of infection in prophylaxis.</p>						

<p><b>5.2 Acute Glomerulonephritis</b> - definition, etiology, pathogenesis, clinical presentation, complications, diagnostic tests, treatment, prevention. Emergence in case of nephrogenic arterial hypertension. Importance of nidus of infection in prophylaxis. <b>Nephrotic syndrome.</b></p> <p><b>Chronic Glomerulonephritis</b> - etiology, pathogenesis, classification, clinical presentation, treatment, prevention.</p>					
<p><b>5.3 Acute Renal Failure, Chronic Renal Failure</b> - etiology, classification, clinical presentation, general approach to treatment. Dental management and prevention considerations for patients with acute renal failure, pathogenesis, diagnostic tests. Oral health changes in patients with chronic renal insufficiency. Dental management for patients receiving hemodialysis. Dental management for patients receiving immunosuppressive therapy (by the example of renal transplant patients).</p> <p><b>Uremic coma.</b> Emergence. Dental aspects of treatment of the patient who take immunosuppressive drugs.</p>					
<p><b>The final control module 1</b></p>	6	4	2		Current control as a fulfillment of different tasks: multiple choices tests. Tests of constructive builds
<p><b>Module 2. Basis of internal medicine: diseases of blood, endocrine and immune systems, allergic disease.</b></p> <p>Module's goals:</p> <ol style="list-style-type: none"> <li>1. To demonstrate the skills of analyze the results of basic laboratory and instrumental methods of examination of patients with somatic diseases which need the special</li> <li>2. To demonstrate the skills to confirm diagnosis which needed in special tactic of dentist in patient treatment</li> <li>3. To assess importance of somatic pathology for development in course of diseases of oral cavity and role of dental pathology in development of somatic pathology</li> <li>4. To indicate the role of dentist in prevention of internal diseases and its complication</li> <li>5. Provide medical care in a main emergencies.</li> </ol>	90/3.0	16	50	24	4
<p><b>Content modules:</b></p>					

<p><b>Content module 6. Endocrine Disease And Metabolic Disorders.</b> Concrete goals: - Master main principles of patient examination with endocrine disease and metabolic disorders. - summarise results of examination of patient and maintain diagnosis - interpret interrelation between somatic pathology and oral cavity disorders - master of general principles, prevention and providing help in emergencies</p>	34	8	18	8	4	
<p><b>6.1 Diabetes Mellitus</b> - definition, classification, etiology, pathogenesis, clinical presentation, the conception of long-term complications (neurologic, macrovascular, microvascular), diagnostic tests, general characteristics of type 1 and type 2 diabetes. Importance of viral infection in Diabetes mellitus Type 1. Diabetic coma. Cardiometabolic syndrome. Diabetes therapy - diet and nutrition, oral agents for diabetes control, insulin and its types. Oral health changes in patients with diabetes mellitus. Dental management considerations for patients with diabetes mellitus. <b>Diabetic Ketoacidosis</b> in dental office - high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention. <b>Hypoglycemia</b> in dental office - high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention. The role of dentists in patient education about diabetes mellitus and its long-term complications. Modification of risk factors. Patients examination.</p>						Current control as a fulfillment of different tasks: multiple choices tests. Tests of constructive builds
<p><b>6.2 Thyroid Disorders. Thyrotoxicosis</b> - pathogenesis, clinical presentation, diagnostic tests, general approach to treatment. Oral health changes in patients with thyrotoxicosis. Dental management considerations for patients with thyrotoxicosis. <b>Thyroid Storm</b> - triggering agents, diagnosis, emergency medical treatment, prevention. <b>Hypothyroidism</b> - pathogenesis, clinical presentation, diagnostic tests, general approach to treatment. Oral health changes in patients with hypothyroidism. Dental management considerations for patients with hypothyroidism. <b>Myxedema Coma</b> - triggering agents, diagnosis, emergency medical treatment, prevention. <b>Hyperparathyroidism. Hypoparathyroidism.</b> Influence of mineral metabolism disorders on teeth and oral cavity condition. Patients examination.</p>						

<p><b>6.3 Adrenal and Pituitary Gland Disorders. Pituitary-Dependent Cushing's Disease and Cushing's Syndrome</b> - definition, etiology, pathogenesis, clinical presentation, diagnostic tests, treatment. Oral health changes in patients with pituitary-dependent Cushing's disease and Cushing's syndrome. Dental management considerations for patients with pituitary-dependent Cushing's disease and Cushing's syndrome. <b>Primary (Addison's Disease) and Secondary Adrenal Insufficiency</b> - etiology, pathogenesis, clinical presentation, diagnostic tests, treatment. Oral health changes in patients with adrenal insufficiency. Dental management considerations for patients with adrenal insufficiency. <b>Adrenal (Addisonian) Crisis</b> - triggering agents, diagnosis, emergency medical treatment. <b>Pheochromocytoma</b> - definition, pathogenesis, clinical presentation, diagnosis, treatment. Dental management considerations for patients with pheochromocytoma. <b>Acromegaly</b> - definition, etiology, pathogenesis, clinical presentation, diagnostic tests, treatment. Oral health changes in patients with acromegaly. <b>Nanism</b>. Dental management considerations for patients with acromegaly. Patients examination.</p>						
<p><b>Content module 7. Hematologic Disorders.</b> Concrete goals: - Master main principles of patient examination with hematologic disorders. - summarise results of examination of patient and maintain diagnosis - interpret interrelation between somatic pathology and oral cavity disorders - master of general principles, prevention and providing help in emergencies</p>	32	6	18	8	4	
<p><b>7.1 Anemias</b> - definition, etiology, classification, laboratory findings. <b>Iron Deficiency Anemia</b> - definition, etiology, pathogenesis, clinical presentation, laboratory manifestations, treatment, prevention. Oral health changes in patients with iron deficiency anemia. Oral manifestations of iron deficiency. <b>Megaloblastic Anemias</b> - definition, etiology, pathogenesis, clinical presentation, laboratory manifestations, treatment, prevention. Oral health changes in patients with megaloblastic anemias. <b>Hypoplastic Anemia</b> - definition, etiology, pathogenesis, clinical presentation, laboratory manifestations, treatment, prevention. Oral health changes in patients with hypoplastic anemia. Dental management for neutropenic patients. <b>Hemolytic Anemia</b> - definition, etiology, pathogenesis, clinical presentation, laboratory manifestations, treatment, prevention. Oral health changes in patients with sickle cell anemia and thalassemia. Dental management for patients with anemia. Dental tactic in case of neutropenia. Patients examination.</p>						Current control as a fulfillment of different tasks: multiple choices tests. Tests of constructive builds

<p><b>7.2 Hematologic Disorders.</b> WHO classification. <b>Leukemias</b> - definition, etiology, pathogenesis, classification, laboratory findings. <b>Acute Leukemia</b> - etiology, pathogenesis, clinical presentation, laboratory manifestations, prognosis, treatment, prevention. Oral health changes in patients with acute leukemias. Dental management considerations for patients with acute leukemias. <b>Chronic Myeloid Leukemia</b> - etiology, pathogenesis, clinical presentation, laboratory manifestations, prognosis, treatment. Dental management considerations for patients with chronic myelogenous leukemia. <b>Polycythemia Vera</b> - definition, pathogenesis, clinical presentation, laboratory manifestations, prognosis, treatment. Oral health changes in patients with polycythemia vera. Dental management considerations for patients with polycythemia vera. <b>Agranulocytosis</b> - definition, pathogenesis, clinical presentation, laboratory manifestations, prognosis, treatment. Oral health changes in patients with agranulocytosis. Dental management considerations for patients with agranulocytosis. Patients examination.</p>					
<p><b>7.3 Haemostatic Disorders.</b> The conception of hemostatic system - definition, major components, hemostatic phases, classification of hemostatic disorders, types of bleeding manifestation. <b>Willebrand diseases</b> - definition, etiology, pathogenesis, clinical presentation, laboratory manifestations, treatment. <b>Henoch-Schonlein Purpura</b> - definition, etiology, pathogenesis, clinical presentation, laboratory manifestations, treatment. <b>Idiopathic Thrombocytopenic Purpura</b> - definition, clinical presentation, laboratory manifestations, treatment. Oral health changes in patients with idiopathic thrombocytopenic purpura. Dental management considerations for patients with idiopathic thrombocytopenic purpura. <b>Hemophilia</b> - definition, classification, clinical presentation, laboratory manifestations, treatment. Dental management considerations for patients with haemophilia. Patients examination.</p>					
<p><b>Content module 8. Diseases of the immune system in dental practitioners. Allergic Diseases. Secondary immunodeficiency.</b> Concrete goals: - Master main principles of patient examination with immune disorders. - summarise results of examination of patient and maintain diagnosis - interpret interrelation between somatic pathology and oral cavity disorders - master of general principles, prevention and providing help in emergencies</p>	12	2	4	6	Current control as a fulfillment of different tasks: multiple choices tests. Tests of construct

<p><b>8.1 Allergic Reactions</b> - definition, type of allergens, pathogenetic phase, classification, general approach to treatment, prevention. <b>Anaphylactic shock. Urticaria. Quincke's oedema. Serum sickness.</b> Definition, classification, clinical presentation, laboratory manifestations, emergencies, treatment. Dental management for patients with allergic reactions. <b>Secondary immunodeficiency.</b> Dental aspects of immune disorders.</p> <p><b>Common Allergens in Dentistry.</b> Prevention of allergic reactions in dental office. Patients examination.</p>						ive builds
<p><b>Case history.</b></p>	6		6			
<p><b>Final control learning module 2</b></p>	6		4	2		Current control as a fulfillment of different tasks: multiple choices tests. Tests of constructive builds
<p><b>TOTAL</b></p>	255/8.5	46	140	69	2-4	

## CURRICULUM OF THE LECTURES

№	The topic	Hours	Course
<b>Module 1. Basis of internal medicine and disorders of: respiratory, cardiovascular, urinary, alimentary system, rheumatic diseases</b>			
1.	<b>Chronic Obstructive Pulmonary Disease. Bronchial asthma.</b> Importance of the dentist activity in prevention.	2	II
2.	<b>Pneumonia. Pleurisy. Respiratory failure.</b> Importance of the dentist activity in prevention.	2	II
3.	<b>Arterial hypertension. Secondary Hypertension. Hypertensive crises.</b> Importance of the dentist activity in prevention.	2	II
4.	<b>Heart Failure. Importance of the dentist activity in prevention.</b> Dental aspects of managements.	2	III
5.	<b>CHD. Angina Pectoris. Acute coronary syndrome.</b> Importance of the dentist activity in prevention.	2	III
6.	<b>Emergencies in cardiology: myocardial infarction, Sudden cardiac death, Carcinogenic shock.</b>	2	III
7.	<b>Syncope. Paroxysmal Tachycardia, bradycardia, Morgagni-Adams-Stokes syndrome, Third-Degree Atrioventricular Block.</b>	2	III
8.	<b>Rheumatic Disease. Infective Endocarditis.</b> Importance of the dentist activity in prevention.	2	III
9.	<b>Acquired Valve Disease.</b> Dental aspects of managements.	2	III
10.	<b>Systemic connective tissue disorders.</b> Dental aspects of managements.	2	III
11.	<b>Chronic disease of intestine: Chronic enteritis, Crone disease, ulcerative colitis, irritable colon system</b>	2	III
12.	<b>Emergence in gastroenterology.</b> Dental aspects.	2	III
13.	<b>Chronic liver diseases.</b>	2	III
14.	<b>Chronic Renal Disorders: Pyelonephritis, Glomerulonephritis.</b>	2	III
15.	<b>Renal Failure. Uremic coma.</b> Dental aspects.	2	III
<b>Module 2. Basis of internal medicine: diseases of blood, endocrine and immune systems, allergic disease.</b>			
16.	<b>Diabetes Mellitus.</b>	2	IV
17.	<b>Thyroid Disorders.</b>	2	IV
18.	<b>Adrenal and Pituitary Gland Disorders</b>	2	IV
19.	<b>Emergence in Endocrinology</b>	2	IV
20.	<b>Anemias.</b> Dental aspects.	2	IV
21.	<b>Leukemia and lymphomas.</b> Changes in oral cavity at agranulocytosis.	2	IV
22.	<b>Haemostatic Disorders.</b> clinical presentation of Hemophilia and Willebrand diseases.	2	IV
23.	<b>Allergic Reactions. Anaphylactic shock. Quincke's oedema. Urticaria.</b>	2	IV
<b>Total</b>		46	

CURRICULUM OF THE CLASSES OF INTERNAL MEDICINE

№	Topic	Hours	Course
<b>Module 1. Basis of internal medicine and disorders of: respiratory, cardiovascular, urinary, alimentary system, rheumatic diseases</b>			
1.	<b>Respiratory failure.</b> Dental aspects of respiratory disorders. First aid principles. Acute respiratory failure: causes and first aid. Pneumothorax. Asphyxia. Pulmonary oedema. Basis of biosafety and bioethics. Immunoprophylaxis.	2	II
2.	<b>Chronic Obstructive Pulmonary Disease.</b> Bronchial obstructive syndrome. Lung emphysema. Dental aspects of management. Prevention and.	2	II
3.	<b>Bronchial asthma.</b> Importance of oral cavity sanitization for primary and secondary prevention of asthma. Asthma attack in dental office: triggering agents, diagnosis, emergency medical treatment, prevention. Dental aspects of management. Rehabilitation.	2	II
4.	<b>Pleurisy</b> - definition, etiology, pathogenesis, clinical presentation, comparison of pleural exudate and transudate, diagnostics and treatment. Dental aspects.	2	II
5	<b>Pneumonia</b> - definition, etiology, pathogenesis, clinical presentation, complications, diagnostic tests, treatment, prevention. Oral health changes in patients with pneumonia. Dental management considerations for patients with pneumonia. Dental aspects.	2	II
6	<b>Lung Pyogenic Infections. Bronchiectasia, Lung Abscess, Gangrene</b> - definition, etiology, pathogenesis, clinical presentation, complications, diagnostic tests, pharmacologic therapy and surgical intervention, prevention. - definition, etiology, pathogenesis, clinical presentation, complications, diagnostic tests, pharmacologic therapy. The conception of pulmonary gangrene. Dental aspects.	2	II
7	<b>Lung Cancer</b> Dental aspects of clinical presentation. Dental management of patients receiving radiation therapy.	2	II
8	<b>Arterial hypertension</b> -classification, pathogenesis, conception of target organ damage, clinical presentation, treatment. Dental tactics depending of blood pressure level.	2	II
9	<b>Secondary Hypertension</b> – classification. <b>Hypertensive crises. Hypertensive Urgency and Emergency</b> in dental office — high risk patients, triggering agents, diagnosis, urgency and emergency medical treatment, prevention. The role of dentists in hypertension. patient education about hypertension.	2	II
10	<b>Atherosclerosis. Coronary Heart Disease (CHD)</b> - classification, pathogenesis, clinical presentation, investigatory techniques, treatment, prevention. The current findings regarding the association between periodontal disease and atherosclerosis. - etiology, pathogenesis, clinical forms, classification. <b>Chronic CHD</b> - The role of dentists in patient education about atherosclerosis and CHD prevention.	2	III
11	<b>CHD. Angina Pectoris. Unstable angina</b> in dental office – clinical forms, triggering agents, diagnosis, emergency medical treatment, prevention. Oral health changes in patients with chronic CHD. Dental management considerations for patients with chronic CHD.	2	III
12	<b>Acute coronary syndrome. Myocardial infarction.</b> Definition, pathogenesis, classification, typical and atypical clinical forms, diagnostic. Dental aspects.	2	III
13	<b>Acute myocardial infarction.</b> Complications, emergency, diagnostic, classification. Cardiogenic shock. Myocardial infarction in dental office. High-risk group. Provoking factors. Diagnosis, emergency, treatment, prevention.	2	III
14	<b>Sudden cardiac death.</b> Ventricular fibrillation, asystoly, cardiopulmonary resuscitation. Sudden cardiac death in dental office. High-risk group. Provoking factors. Diagnosis, emergency, treatment, prevention. Dental aspects emergency, treatment, prevention.	2	III
15	<b>Heart Failure. Acute Heart Failure.</b> Acute heart failure in dental office. High-risk group. Provoking factors. Diagnosis, emergency, treatment, prevention. <b>Pulmonary tromboembolism.</b> Definition, Risk factors, pathogenesis, diagnosis, emergency, treatment, prevention.	2	III



16	<b>Arrhythmias. Extrasystoly. Paroxysmal Supraventricular and Ventricular Tachycardia.</b>	2	III
17	<b>Atrial Fibrillation and Atrial Flutter, Heart blocks. Third-Degree Atrioventricular Block, Morgagni-Adams-Stokes syndrome.</b> Dental aspects of diagnostics, emergency, treatment, prevention.	2	III
18	<b>Arterial Hypotension. Acute vascular failure. Syncope. Collapse. Shock.</b> Dental aspects of diagnostics, emergency, treatment, prevention.	2	III
19	<b>Rheumatic Disease. Acute Rheumatic Fever. Chronic Rheumatic Heart Disease.</b> Dental aspects of diagnostics, emergency, treatment, prevention.	6	III
20	<b>Infective Endocarditis</b> - Oral health changes in patients with infective endocarditis. Dental management for patients with infective endocarditis. The role of dentists in prevention of infective endocarditis - cardiac conditions requiring antibiotic prevention, preventive regimens for dental and oral procedures.	6	III
21	<b>Acquired Valve Disease. Mitral Regurgitation. Mitral Stenosis. Aortic Regurgitation. Aortic Stenosis</b> etiology, hemodynamics, clinical presentation, diagnostic tests, general approach to treatment, indications for surgery, prevention. Dental management of patients with acquired valve disease.	6	III
22	<b>Systemic connective tissue disorders. Systemic sclerosis. Raynaud's Syndrome Sjogren's Syndrome Rheumatoid Arthritis Systemic Lupus Erythematosus Systemic vasculitis:</b> etiology, pathogenesis, classification, clinical presentation, diagnostic tests, treatment, prevention Dental management of patients who take corticosteroids.	6	III
23	<b>Gastritis. Peptic Ulcer Disease.</b> Complications: penetration, perforation, bleeding, pylorostenosis, malignization. <b>Chronic disease of intestine. Chronic enteritis. Chronic disease of intestine. Chronic enteritis. Irritable bowel syndrome</b> definition, etiology, pathogenesis, classification, clinical presentation, diagnostic tests, treatment. Inflammatory diseases of colon (Crone disease, ulcerative colitis). Risk factors, pathogenesis, clinical manifestation, treatment, prevention. Chewing disorders and it's role in a development of alimentary disorders.	6	III
24	<b>Pancreatitis. Peculiarities of pain syndrome. Cholecystitis. Gallstone Disease. Biliary (Hepatic) Colic Chronic Hepatitis Liver cirrhosis.</b> Dental aspects. Safety rules in treatment of patients with a hepatitis B,C,D. <b>Emergence in case of hepatic coma, oesophageal bleeding, severe ascites.</b>	6	III
25	<b>Pyelonephritis. Urolithiasis. Main Syndroms</b> - definition, etiology, pathogenesis, classification, clinical presentation, diagnostic tests, treatment, prevention. Importance of nidus of infection in prophylaxis.	4	III
26	<b>Acute Glomerulonephritis. Chronic Glomerulonephritis. Chronic renal disease. Nefrotic syndrome</b> - definition, etiology, pathogenesis, clinical presentation, complications, diagnostic tests, treatment, prevention. Emergence in case of nephrogenic arterial hypertension. Importance of nidus of infection in prophylaxis.	6	III
27	<b>Acute Renal Failure. Chronic Renal Failure. Uremic coma.</b> - etiology, classification, clinical presentation, general approach to treatment. Dental management and prevention considerations for patients with acute renal failure, pathogenesis, diagnostic tests. Oral health changes in patients with chronic renal insufficiency. Dental management for patients receiving hemodialysis. Dental management for patients receiving immunosuppressive therapy (by the example of renal transplant patients). Emergence. Dental aspects of treatment of the patient who take immunosuppressive	4	III
28	<b>The final control module 1</b>	4	
<b>Module 2. Basis of internal medicine: diseases of blood, endocrine and immune systems, allergic disease.</b>			

29	<b>Diabetes Mellitus</b> - definition, classification, etiology, pathogenesis, clinical presentation, the conception of long-term complications (neurologic, macrovascular, microvascular), diagnostic tests, general characteristics of type 1 and type 2 diabetes. Importance of viral infection in Diabetes mellitus Type1. Diabetic coma. Cardiometabolic syndrome. Diabetes therapy - diet and nutrition, oral agents for diabetes control, insulin and its types. Oral health changes in patients with diabetes mellitus. Dental management considerations for patients with diabetes mellitus. <b>Diabetic Ketoacidosis</b> in dental office - high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention. <b>Hypoglycemia</b> in dental office - high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention. The role of dentists in patient education about diabetes mellitus and its long-term complications.	6	IV
30	<b>Thyroid Disorders. Thyrotoxicosis</b> Dental aspects of prevention. <b>Hypothyroidism</b> pathogenesis, clinical presentation, complications. <b>Hyperparathyroidism. Hypoparathyroidism.</b> Emergency in case of convulsive syndrome. Influence of mineral metabolism disorders on teeth and oral cavity condition.	6	IV
31	<b>Adrenal and Pituitary Gland Disorders. Primary (Addison's Disease) and Secondary Adrenal Insufficiency. Adrenal (Addisonian) Crisis</b> - triggering agents, diagnosis, emergency medical treatment. <b>Pituitary-Dependent Cushing's Disease and Cushing's Syndrome. Pheochromocytoma</b> - emergency in case of hypertensive crisis. <b>Acromegaly. Nanism.</b> Oral health changes in patients with endocrine disorders.	6	IV
32	<b>Anemias. Iron Deficiency Anemia. B<sub>12</sub> Deficiency Anemia. (Megaloblastic Anemia). Hypoplastic Anemia.</b> Oral health changes in patients with anemias. Dental tactic in case of neutropenia. <b>Hemolytic Anemia.</b> Dental aspects of anemia prevention. Patients	6	IV
33	<b>Leukemias. Acute and chronic lymphoblastic B-lymphocyte and T-lymphocyte leukaemia and lymphomas.</b> Acute and Chronic Myeloid Leukemias. <b>Polycythemia Vera. Agranulocytosis</b> Oral health changes in patients with agranulocytosis. Dental management of patients with agranulocytosis. Patients' examination.	6	IV
34	<b>Haemostatic Disorders. Thrombopenia and thrombopathy.</b> Dental aspects of management. <b>Idiopathic Thrombocytopenic Purpura.</b> Emergency in bleeding. Oral health changes. <b>Willebrand diseases and Hemophilia</b> - manifestation and course. Dental management considerations for patients with haemophilia. <b>Henoch-Schonlein Purpura.</b> Oral health changes . Prevention and bleeding management. Patients	6	IV
35	<b>Allergic Reactions</b> - definition, type of allergens. <b>Anaphylactic shock. Urticaria. Quincke's oedema. Serum sickness.</b> Aetiology, mechanism, definition, classification, clinical presentation, laboratory manifestations, emergencies, treatment. Dental management for patients with allergic reactions. <b>Secondary immunodeficiency.</b> Dental aspects of immune disorders. Patients examination.	4	IV
36	<b>Defence of Case history.</b>	6	IV
38	<b>Final control learning module 2</b>	4	IV
	<b>TOTAL</b>	140	II-IV

## CURRICULUM OF THE CLASSES

No	Subject	Hours of Practises at University	Year
<b>Module 1. Basis of internal medicine and disorders of: respiratory, cardiovascular, urinary, alimentary system, rheumatic diseases</b>			
1	Biosafety and bioethics	2	II
2	Acute bronchitis. Chronic bronchitis	2	II
3	Pneumonia	2	II
4	Acute respiratory failure	2	II
5	Lung pyogenic infections	2	II
6	Lung cancer	2	II
7	Pleurisy	2	II
8	Bronchial Asthma	1	II
9	Respiratory emergencies	1	II
10	Atherosclerosis. Chronic coronary heart disease	2	II
11	Hypertension	3	II
12	Heart failure	2	III
13	Acute heart attacks. Sudden cardiac death. Acute coronary syndrome. Myocardial infarction	1	III
14	Arrhythmias	1	III
15	Cardiac emergencies	1	III
16	Rheumatic fever. Infective endocarditis	1	III
17	Acquired valve disease	1	III
18	Scleroderma, SLE, Systemic vasculitis	2	III
19	Raynaud's phenomenon. Sjogren's syndrome	2	III
20	Gastritis. Peptic ulcer disease	1	III
21	Malabsorption, irritable bowel syndrome. Inflammatory bowel disease	1	III
22	Chronic Pancreatitis	1	III
23	Gallstones. Chronic cholecystitis	1	III
24	Differential diagnosis of jaundice. Chronic liver disease	1	III
25	Gastrointestinal emergencies. Gastrointestinal bleeding	1	III
26	Renal disorders.	2	III
27	Renal failure	1	III
28	Urinary emergencies	2	III
29	Module control	2	III
<b>Module 2. Basis of internal medicine: diseases of blood, endocrine and immune systems, allergic disease.</b>			
30	Diabetes mellitus	2	IV
31	Thyroid disorders	2	IV
32	Adrenal and pituitary gland disorders	2	IV
33	Endocrine emergencies	2	IV
34	Anemias	2	IV
35	Leukemias	3	IV
36	Hemorrhagic diatheses	3	IV
37	Serum sickness	2	IV
38	Secondary immunodeficiency	2	IV
39	Allergic emergencies	2	IV
40	Module control	2	IV
	<b>Total</b>	<b>69</b>	

## Checklist of Practical Skills

### Module 1. Basis of internal medicine and disorders of: respiratory, cardiovascular, urinary, alimentary system, rheumatic diseases

1. To demonstrate the knowledge of next practical skills:
  - palpation of the chest
  - palpation of the abdomen
  - palpation of the joints
  - palpation of the lymphatic nodes
  - palpation of the thyroid glands
  - palpation of the vessels
  - percussion of the lung
  - percussion of the heart
  - percussion of the abdomen
  - blood pressure measurement
  - heart rate measurement
  - gastric lavage
  - bowel lavage
2. To diagnose in outpatient department that internal diseases which demand special dental tactic (asthma, acute respiratory failure, severe pneumonia, pleurisy, hypertension, rheumatic fever, infective endocarditis, acquired valve disease, hepatocellular insufficiency, gastritis, peptic ulcer, hepatitis, cirrhosis, hepatic failure, nephritic syndrome) and can cause medical emergencies (acute respiratory failure, hypertensive urgency and emergency, acute left ventricular failure, syncope, abdominal emergencies, uremic coma) to prevent complications and treat critically ill patients.
3. To administer necessary laboratory and instrumental examination and prepare patient for possible surgery. To know dental tactics in these cases.
4. To be able to detect symptoms and signs of internal organs disorders by changes in oral cavity.
5. To be able to use knowledge of internal medicine subject for prevention of dental disease.
6. Diagnose and treat the following medical emergencies:
  - asthmatic exacerbation, asthmatic status;
  - life-threatening acute haemoptysis;
  - acute respiratory failure;
  - idiopathic pneumothorax;
  - anginal attack;
  - sudden cardiac death;
  - acute myocardial infarction;
  - hypertensive urgency and emergency;
  - paroxysmal supraventricular tachycardia;
  - paroxysmal ventricular tachycardia;
  - paroxysmal atrial fibrillation and atrial flutter;
  - third-degree atrioventricular block;
  - acute left ventricular failure;
  - syncope;
  - biliary colic;

- hepatic encephalopathy;
- gastrointestinal bleeding;
- renal colic;
- uremic coma;

## **Checklist of Practical Skills**

### **Module 2. Basis of internal medicine: diseases of blood, endocrine and immune systems, allergic disease.**

1. To demonstrate the knowledge of next practical skills:
  - palpation of the chest
  - palpation of the abdomen
  - palpation of the joints
  - palpation of the lymphatic nodes
  - palpation of the thyroid glands
  - palpation of the vessels
  - percussion of the lung
  - percussion of the heart
  - percussion of the abdomen
  - blood pressure measurement
  - heart rate measurement
  - gastric lavage
  - bowel lavage
2. To diagnose in outpatient department that internal diseases which demand special dental tactic (diabetes mellitus, anemias, leukemias, Henoch-Schonlein purpura, idiopathic thrombocytopenic purpura hemophilia) and can cause medical emergencies (anaphylactic shock, comas, angioedema) to prevent complications and treat critically ill patients.
3. To administer necessary laboratory and instrumental examination and prepare patient for possible surgery. To know dental tactics in these cases.
4. To be able to detect symptoms and signs of internal organs disorders by changes in oral cavity.
5. To be able to use knowledge of internal medicine subject for prevention of dental disease.
6. Diagnose and treat the following medical emergencies:
  - diabetic ketoacidosis;
  - hypoglycemia;
  - thyroid crisis;
  - myxedema coma;
  - adrenal crisis;
  - anaphylactic shock;
  - urticaria and angioedema;
  - Stevens-Johnson's and Lyell's syndromes.

## LIST OF QUESTIONS FOR FINAL MODULE CONTROL

### **Module 1. Basis of internal medicine and disorders of: respiratory, cardiovascular, urinary, alimentary system, rheumatic diseases**

1. Internal disease: determination, goals of study by students of stomatological faculty, principles of examination of patient, treatment and prophylaxis.
2. Symptom, Syndrome ,diagnosis, diagnostic process, prognosis.
3. Acute bronchitis - etiology, pathogenesis, clinical presentation, treatment, prevention.
4. Chronic bronchitis - definition, etiology, pathogenesis, classification, clinical presentation complications, diagnostic tests, treatment, prevention. The conception of chronic obstructive lung disease.
5. Dental management considerations for patients with chronic obstructive bronchitis.
6. Cor pulmonale - etiology, pathogenesis, clinical presentation, diagnostic tests, treatment, prevention.
7. Bronchiectasia - definition, etiology, pathogenesis, clinical presentation, complications, diagnostic tests, pharmacologic therapy and surgical intervention, prevention.
8. Bronchial Asthma - definition, classification, etiology, pathogenesis, clinical presentation, complications, diagnostic tests, treatment, prevention.
9. Asthmatic exacerbation in dental office - triggering agents, diagnosis, emergency medical treatment, prevention. The conception of status asthmaticus.
10. Dental management considerations for patients with asthma.
11. Oral health changes in patients with asthma.
12. Pneumonia - definition, etiology, pathogenesis, clinical presentation, complications, diagnostic tests, treatment, prevention.
13. Oral health changes in patients with pneumonia.
14. Dental management considerations for patients with pneumonia.
15. Lung abscess - definition, etiology, pathogenesis, clinical presentation, complications, diagnostic tests, pharmacologic therapy, indications for surgical intervention, prevention. The conception of pulmonary gangrene.
16. Oral health changes in patients with lung abscess.
17. Lung cancer - current concepts of carcinogenesis, etiology, classification, clinical presentation, diagnostic tests, treatment, indications for surgical intervention, prevention.
18. Oral health changes in patients with lung cancer.
19. Dental management considerations for oncology patients receiving radiation therapy (by the example of patients with lung cancer).
20. Pleurisy - definition, etiology, pathogenesis, clinical presentation, comparison of pleural exudate and transudate, treatment, prevention.
21. Life-threatening acute hemoptysis in dental office - high risk patients, clinical presentation, diagnosis, emergency medical treatment.
22. Acute respiratory failure in dental office - definition, high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention.
23. Idiopathic pneumothorax - high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention.
24. Rheumatic fever - definition, etiology, pathogenesis, classification, clinical presentation, di-

- agnostic tests, treatment, prevention.
25. Oral health changes in patients with rheumatic fever.
  26. Dental management considerations for patients with rheumatic fever.
  27. Infective endocarditis - definition, etiology, pathogenesis, classification, clinical presentation, diagnostic tests, treatment, prevention.
  28. Oral health changes in patients with infective endocarditis.
  29. Dental management considerations for patients with infective endocarditis. The role of dentists in prevention of bacterial endocarditis - cardiac conditions requiring antibiotic prevention, preventive regimens for dental and oral procedures.
  30. Mitral regurgitation - etiology, hemodynamics, clinical presentation, diagnostic tests, general approach to treatment, indications for surgical intervention, prevention.
  31. Mitral stenosis - etiology, hemodynamics, clinical presentation, diagnostic tests, general approach to treatment, indications for surgical intervention, prevention.
  32. Aortic regurgitation - etiology, hemodynamics, clinical presentation, diagnostic tests, general approach to treatment, indications for surgical intervention, prevention.
  33. Aortic stenosis - etiology, hemodynamics, clinical presentation, diagnostic tests, general approach to treatment, indications for surgical intervention, prevention.
  34. Dental management considerations for patients with acquired valve disease.
  35. Atherosclerosis - definition, etiology, mechanisms of atherosclerotic plaque development, natural history.
  36. The current findings regarding the association between periodontal disease and atherosclerosis. The role of Russel Ross' works in study of the atherosclerosis pathophysiology.
  37. Coronary heart disease - etiology, pathogenesis, clinical forms, classification.
  38. Coronary heart disease - classification, pathogenesis, clinical presentation, investigatory techniques, treatment, prevention.
  39. The role of dentists in patient education about atherosclerosis and experiencing coronary heart disease events. Modification of risk factors.
  40. Anginal attack in dental office - triggering agents, diagnosis, emergency medical treatment, prevention.
  41. Oral health changes in patients with chronic coronary heart disease.
  42. Dental management considerations for patients with chronic coronary heart disease.
  43. Sudden cardiac death in dental office - definition, high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention.
  44. Acute coronary syndrome - definition, classification, general approach to treatment.
  45. Myocardial infarction - definition, pathogenesis, classification, typical clinical presentation, changes in cardiac enzymes, ECG diagnostic feature.
  46. Acute myocardial infarction - typical and atypical clinical presentation.
  47. Myocardial infarction - complications. Cardiogenic shock - diagnosis, classification, treatment.
  48. Myocardial infarction - general approach to treatment.
  49. Myocardial infarction in dental office — high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention.
  50. Hypertension - definition, classification, pathogenesis, conception of target organ damage, clinical presentation, treatment.

51. Essential (primary) hypertension - definition, classification, etiology, treatment, prevention.
52. Secondary hypertension - definition, etiology, treatment, prevention.
53. Oral health changes in patients with hypertension.
54. Dental management considerations for patients with hypertension. Managing the care of patients with hypertension related to blood pressure level and the health status.
55. Hypertensive urgency and emergency in dental office - high risk patients, triggering agents, diagnosis, urgency and emergency medical treatment, prevention.
56. The role of dentists in patient education about hypertension. Modification of risk factors.
57. Paroxysmal supraventricular tachycardia in dental office - high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention.
58. Paroxysmal ventricular tachycardia in dental office - high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention.
59. Permanent atrial fibrillation and atrial flutter - definition, etiology, pathogenesis, classification, clinical presentation, ECG diagnostic feature, general approach to chronic treatment.
60. Dental management considerations for patients receiving continuous oral anticoagulant or aspirin treatment.
61. Paroxysmal atrial fibrillation and atrial flutter in dental office - high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention.
62. Third-degree atrioventricular block in dental office - high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention.
63. Dental management considerations for patients with arrhythmias.
64. Chronic heart failure - definition, etiology, pathogenesis, classification, clinical presentation, treatment, prevention.
65. Pulmonary thromboembolism - definition, high risk patients, pathogenesis, clinical presentation, diagnostic tests, treatment, prevention.
66. Acute left ventricular failure in dental office - high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention.
67. Syncope in dental office - high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention.
68. Gastritis - definition, etiology, pathogenesis, classification, clinical presentation, diagnostic tests, treatment.
69. Oral health changes in patients with gastritis. The role of dentists in prevention of gastritis caused by drugs or chemicals.
70. Peptic ulcer disease - definition, etiology, pathogenesis, clinical presentation, diagnostic tests, complications, pharmacologic therapy, indications for surgical intervention.
71. Oral health changes in patients with peptic ulcer disease. Dental implications of *Helicobacter pylori*. The role of dentists in prevention of peptic ulcer disease.
72. Chronic enteritis: etiology, pathogenesis, treatment, clinical features, prophylaxis
73. Dental management for patients with chronic enteritis.
74. Ulcerative colitis - etiology, pathogenesis, clinical presentation, complications, treatment.
75. Crohn's disease - etiology, pathogenesis, clinical presentation, complications, treatment.
76. Irritable bowel syndrome - etiology, classifications, clinical presentation, treatment.
77. Chronic pancreatitis - etiology, pathogenesis, clinical presentation, complications, diagnostic tests, treatment, prevention.
78. Oral health changes in patients with chronic pancreatitis. The role of dentists in prevention



- of chronic pancreatitis.
79. Gallstone disease - etiology, pathogenesis, clinical presentation, complications, treatment, prevention.
  80. Biliary (hepatic) colic in dental office - high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention.
  81. Chronic cholecystitis - etiology, pathogenesis, clinical presentation, complications, diagnostic tests, treatment, prevention.
  82. Differential diagnosis of jaundice, the significance of biochemical tests. The role of dentists in the early diagnosis of jaundice.
  83. The conception of the major clinical and biochemical syndromes in hepatology. Chronic liver disease - definition and etiology.
  84. Chronic hepatitis - definition, etiology, clinical presentation, treatment, prevention.
  85. Cirrhosis - definition, etiology, clinical presentation, treatment, prevention.
  86. Dental management considerations for patients with chronic liver disease. Measures to prevent chronic viral hepatitis transmission in dental office.
  87. Oral health changes in patients with chronic liver disease. Safety rules of dental care at patients with hepatitis B,C,D
  88. The role of dentists in patient education about chronic viral hepatitis and alcohol-induced liver disease.
  89. Hepatic encephalopathy - triggering agents, pathogenesis, clinical presentation, diagnostic tests, emergency medical treatment.
  90. Gastrointestinal bleeding in dental office - high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention.
  91. Acute glomerulonephritis - definition, etiology, pathogenesis, clinical presentation, complications, diagnostic tests, treatment, prevention.
  92. Chronic glomerulonephritis - etiology, pathogenesis, classification, clinical presentation, treatment, prevention.
  93. Chronic pyelonephritis - definition, etiology, pathogenesis, classification, clinical presentation, diagnostic tests, treatment, prevention.
  94. Renal colic in dental office - high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention.
  95. Acute renal failure - classification, etiology, clinical presentation, general approach to treatment.
  96. Chronic renal insufficiency - etiology, pathogenesis, clinical presentation, diagnostic tests, treatment.
  97. Dental management and prevention considerations for patients with acute renal failure.
  98. Oral health changes in patients with chronic renal insufficiency. Dental management considerations for patients receiving hemodialysis.
  99. Uremic coma - triggering agents, diagnosis, emergency medical treatment.
  100. Rheumatoid arthritis: determination, clinic, diagnostic, treatment
  101. Dental management and prevention considerations for patients with rheumatoid arthritis.
  102. Dental tactic at rheumatoid arthritis
  103. Systemic lupus erythematosus: determination, clinic, diagnostic, treatment
  104. Dental management and prevention considerations for patients with systemic lupus erythematosus.

105. Dental tactic at systemic lupus erythematosus.
106. Dental management considerations for patients receiving immunosuppressive therapy (by the example of renal transplant patients).
107. Systemic scleroderma: determination, clinic, diagnostic, treatment
108. Dental management and prevention considerations for patients with systemic scleroderma
109. Systemic vacuities: determination, clinic, diagnostic, treatment. Polyarteritis nodosa
110. Dental changes at vacuities.
111. Raynaud's syndrome: determination, clinic, diagnostic, treatment
112. Sjögren's syndrome: determination, clinic, diagnostic, treatment
113. Dental changes at Sjögren's syndrome.
114. Dental management and prevention considerations for patients with Sjögren's syndrome

## **LIST OF QUESTIONS FOR FINAL MODULE CONTROL**

### **Module 2. Basis of internal medicine: diseases of blood, endocrine and immune systems, allergic disease.**

1. Diabetes mellitus - definition, classification, etiology, pathogenesis, diagnostic tests.
2. Diabetes mellitus - clinical presentation, the conception of long-term complications (neurologic, macrovascular, microvascular), general characteristics of type 1 and type 2 diabetes.
3. Diabetes therapy - diet and nutrition, oral agents for diabetes control, insulin and its types.
4. Oral health changes in patients with diabetes mellitus.
5. Dental management considerations for patients with diabetes mellitus.
6. Diabetic ketoacidosis in dental office - high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention.
7. Hypoglycemia in dental office - high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention.
8. The role of dentists in patient education about diabetes mellitus and its long-term complications. Modification of risk factors.
9. Thyrotoxicosis - pathogenesis, clinical presentation, diagnostic tests, general approach to treatment.
10. Oral health changes in patients with thyrotoxicosis. Dental management considerations for patients with thyrotoxicosis.
11. Thyroid crisis - triggering agents, diagnosis, emergency medical treatment, prevention.
12. Hypothyroidism - pathogenesis, clinical presentation, diagnostic tests, general approach to treatment.
13. Oral health changes in patients with hypothyroidism. Dental management considerations for patients with hypothyroidism.
14. Myxedema coma - triggering agents, diagnosis, emergency medical treatment, prevention.
15. Pituitary-dependent Cushing's disease and Cushing's syndrome - definition, etiology, pathogenesis, clinical presentation, diagnostic tests, treatment.
16. Oral health changes in patients with pituitary-dependent Cushing's disease and Cushing's syndrome. Dental management considerations for patients with pituitary-dependent Cushing's disease and Cushing's syndrome.

17. Primary (Addison's disease) and secondary adrenal insufficiency - etiology, pathogenesis, clinical presentation, diagnostic tests, treatment.
18. Oral health changes in patients with adrenal insufficiency. Dental management considerations for patients with adrenal insufficiency.
19. Adrenal (Addisonian) crisis - triggering agents, diagnosis, emergency medical treatment.
20. Pheochromocytoma - definition, pathogenesis, clinical presentation, diagnosis, treatment.
21. Dental management considerations for patients with pheochromocytoma.
22. Acromegaly - definition, etiology, pathogenesis, clinical presentation, diagnostic tests, treatment.
23. Oral health changes in patients with acromegaly.
24. Dental management considerations for patients with acromegaly.
25. Anemias - definition, etiology, classification, laboratory findings.
26. Iron deficiency anemia - definition, etiology, pathogenesis, clinical presentation, laboratory manifestations, treatment, prevention.
27. Oral health changes in patients with iron deficiency anemia. Oral manifestations of iron deficiency.
28. Megaloblastic anemias - definition, etiology, pathogenesis, clinical presentation, laboratory manifestations, treatment, prevention.
29. Oral health changes in patients with megaloblastic anemias.
30. Hypoplastic anemia - definition, etiology, pathogenesis, clinical presentation, laboratory manifestations, treatment, prevention.
31. Oral health changes in patients with hypoplastic anemia. Dental management considerations for neutropenic patients.
32. Hemolytic anemia - definition, etiology, pathogenesis, clinical presentation, laboratory manifestations, treatment, prevention.
33. Oral health changes in patients with sickle cell anemia and thalassemia. Dental management considerations for patients with sickle cell anemia.
34. Leukemias - definition, etiology, pathogenesis, classification, laboratory findings.
35. Acute leukemia - etiology, pathogenesis, clinical presentation, laboratory manifestations, prognosis, treatment, prevention.
36. Oral health changes in patients with acute leukemias. Dental management considerations for patients with acute leukemias.
37. Chronic myeloid leukemia - etiology, pathogenesis, clinical presentation, laboratory manifestations, prognosis, treatment.
38. Dental management considerations for patients with chronic myelogenous leukemia.
39. Polycythemia vera - definition, pathogenesis, clinical presentation, laboratory manifestations, prognosis, treatment.
40. Oral health changes in patients with polycythemia vera. Dental management considerations for patients with polycythemia vera.
41. Chronic lymphocytic leukemia - etiology, pathogenesis, clinical presentation, laboratory manifestations, prognosis, treatment.
42. Dental management considerations for patients with chronic lymphocytic leukemia.
43. The conception of hemostatic system - definition, major components, hemostatic phases, classification of hemostatic disorders, types of bleeding manifestation.
44. Hereditary hemorrhagic teleangiectasia (Rendu-Osler-Weber syndrome) - definition, patho-

- genesis, clinical presentation.
45. Oral health changes in patients with hereditary hemorrhagic teleangiectasia. Oral treatment precautions for patients with hereditary hemorrhagic teleangiectasia.
  46. Henoch-Schonlein purpura - definition, etiology, pathogenesis, clinical presentation, laboratory manifestations, treatment.
  47. Idiopathic thrombocytopenic purpura- definition, clinical presentation, laboratory manifestations, treatment.
  48. Oral health changes in patients with idiopathic thrombocytopenic purpura. Dental management considerations for patients with idiopathic thrombocytopenic purpura.
  49. Hemophilia - definition, classification, clinical presentation, laboratory manifestations, treatment.
  50. Dental management considerations for patients with hemophilia.
  51. Allergic reactions - definition, type of allergens, pathogenetic phase, classification, general approach to treatment, prevention.
  52. Common allergens in dentistry. Prevention of allergic reactions in dental office.
  53. Anaphylactic shock in dental office - definition, high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention.
  54. Urticaria and angioedema (Quincke's disease) in dental office - high risk patients, triggering agents, diagnosis, emergency medical treatment, prevention.
  55. Stevens-Johnson's and Lyell's syndromes in dentistry - high risk patients, triggering agents, clinical presentation, treatment.

## BIBLIOGRAPHY

### *Required reading*

1. Handbook for medicine, 2006.
2. Internal diseases: An introductory course / Ed. by V. Vasilenko, A. Grebenev. - Moscow: Mir Publishers, 1990.

### *Further reading*

1. Hupp J. R. Medical conditions and how they affect dental care: An issue of dental clinics. - Saunders, 2007.
2. Little J. W., Falace D., Miller C, Rhodus N. L. Dental management of the medically compromised patient, 7<sup>th</sup> ed. - Mosby, 2007.
3. Lockhart P., Meechan J., Nunn J. Dental care of the medically complex patient, 5<sup>n</sup> ed. - Wright, 2003.
4. Malamed S. F. Medical emergencies in the dental office, 6<sup>th</sup> ed. - Mosby, 2007.
5. Nilsson K. R., Piccini J. P. The Osier medical handbook, 2<sup>nd</sup> ed. - Saunders Elsevier, 2006.
6. Scully C, Dios P. D., Kumar N. Special care in dentistry: Handbook of oral care. - Churchill Livingstone, 2006.
7. Scully C, Cawson R. A. Medical problems in dentistry, 5<sup>th</sup>. - Churchill Livingstone, 2004.
8. Sproat C, Burke G., McGurk M. Essential human disease for dentists. - Churchill Livingstone, 2006.