



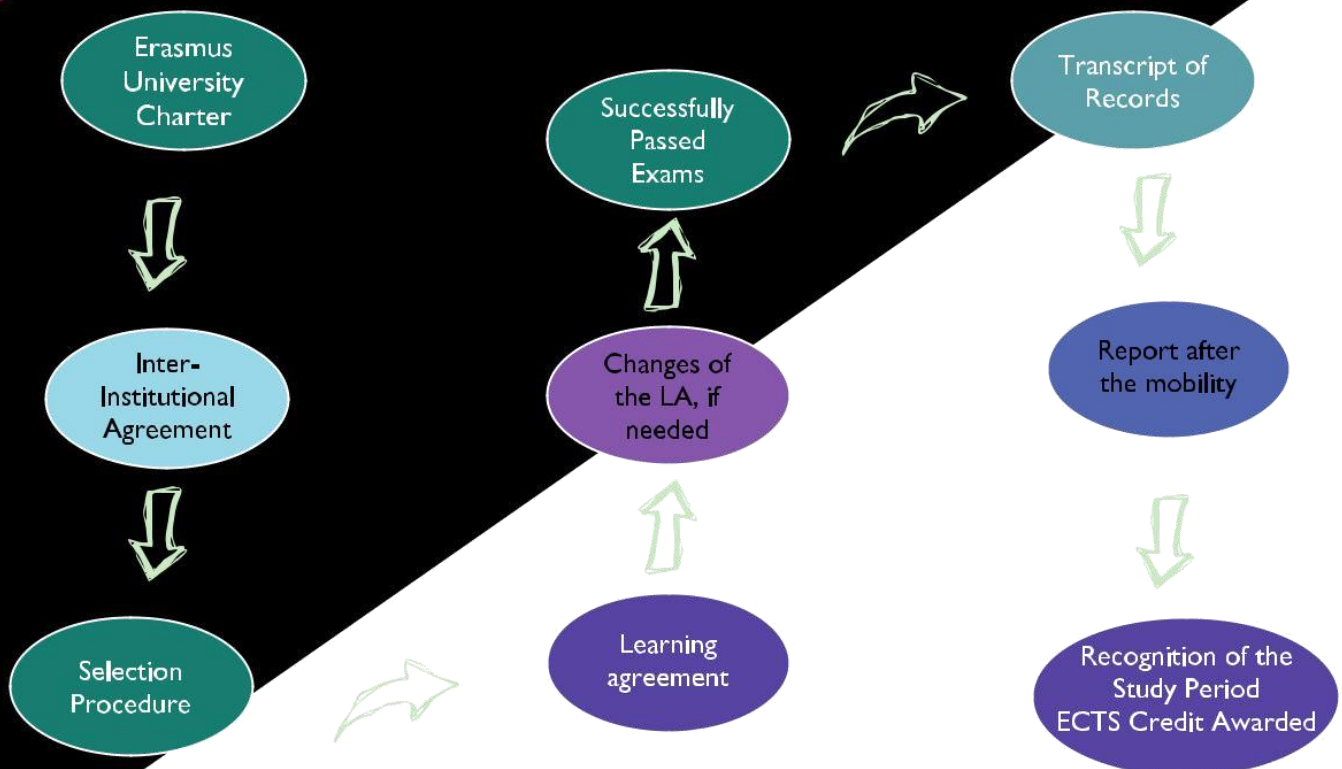
Erasmus+



HUMAN
RESOURCE
DEVELOPMENT
CENTRE

EUROPEAN CREDIT TRANSFER SYSTEM AT MEDICAL UNIVERSITY – SOFIA

The Common Language of Recognition



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**European Credit Transfer System at Medical University – Sofia
The Common Language of Recognition**

Collected and Revised by

Prof. Dr. Radoslav Girchev, MD, PhD, DSc
Head of International Integration & Project Funding Department

Dr. Savena Borisova
Institutional Erasmus & ECTS Coordinator

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ECTS CATALOGUE

MEDICAL UNIVERSITY – SOFIA



The Medical University - Sofia is the oldest state medical institution of higher education. It was founded by Decree of His Majesty King Ferdinand in 1917.

The Medical University - Sofia includes: four faculties (of Medicine, Dental Medicine, Pharmacy, Public Health), Preclinical University Center, Central Medical Library, a College for training of specialists with medical education (social workers, x-ray technicians, laboratory technicians, assistant pharmacists, dental technicians). Fifteen university hospitals that are clinical base of the University belong to the Medical University - Sofia. Since the foundation of the Medical University - Sofia more than 82 000 specialists were instructed including 10500 foreign citizens from more than 80 countries.

The ultimate goal of the University is to teach and train students (under-, post-graduates and Ph.D.), to conduct research and to provide highly specialized health-care for people. The Medical University – Sofia has internationally recognized achievements in: cardio-thoracic surgery, neurosurgery, ophthalmic surgery, high-tech diagnostics of human diseases, prevention programmes for cardio-vascular and inherited diseases, bone-marrow transplantation, development of new compounds of synthetic and natural origin, etc.

The main objectives of the University are to provide high-quality education in a surrounding enriched by research work; to preserve and strengthen its position as educational and scientific institution of the highest international quality; to form high professional and humane qualities of its graduates in the spirits of the European democracy and tolerance; to provide forming of high quality lecturers and improve their effectiveness.

In the year 2000 the Medical University joined the SOCRATES/ERASMUS programme of the European Community. The number of partners in the frame of the programme is growing from year to year. For the 2001/2002 academic year the University had bilateral agreements

with Université Libre de Bruxelles, Facultés Universitaires Notre-Dame de la Paix – Namur, University of Ghent, Universitaire Instelling Antwerpen from Belgium; Université de Franche-Comté, Besançon, Université Pierre et Marie Curie – Paris, Université René Descartes - Paris, Université Victor Segalen, Bordeaux 2 from France; Maastricht University, The Netherlands. For the academic year 2015/2016, The Medical University has about 60 Bilateral Agreements.

The European Community promotes co-operation between universities as a means of improving the quality of education for the benefit of students and higher education institutions, and student mobility is the predominant element of the cooperation. The recognition of studies and diplomas is a prerequisite for the creation of an Open European area of education and training where students and teachers can move without obstacles. That is why The European Credit Transfer System (ECTS) has been developed as a means of improving academic recognition for study abroad.

ECTS - EUROPEAN CREDIT TRANSFER

SYSTEM What is ECTS?

ECTS, the European Credit Transfer System, developed by the Commission of the European Communities, is designed to provide common procedures to guarantee academic recognition of studies abroad. It provides a way of measuring and comparing learning achievements of students by using commonly understood measurements, credits and grades, and transferring them from one institution to another and thus widening the choices available to students. In itself, ECTS in no way regulates the content, structure or equivalence of study programmes.

ECTS is a decentralized system, based on the principle of mutual trust and confidence between the participating education institutions. The few rules of ECTS, concerning *Information* (on courses available), *Agreement* (between the home and host institutions) and the *Use of Credit Points* (to indicate student workload) are set out to reinforce this mutual trust and confidence.

ECTS credits

ECTS credits are simply a value allocated to course units to describe the student workload. ECTS credits reflect the quantity of work necessary to complete a full year of academic study at the institution, including lectures, practical work, seminars, private work (in the library or at home), and examinations or other assessment activities. In ECTS, 60 credits represent the workload of an academic year of study, normally 30 credits are given for a semester. It is important that no special courses are set up for ECTS purposes, but that all courses are mainstream courses of the participating institutions, as followed by home students under normal regulations. Credits are also allocated to optional courses, project work, thesis, and practical placements, which form an integral part of the degree programme.

ECTS credits are allocated to course units but are only awarded to students who successfully complete the course by satisfying the assessment requirements.

In the academic year 2004/2005 the credit system, compatible with the ECTS, was introduced from the first year of study at the three faculties of the Medical University - Faculties of Medicine, Dental Medicine and Pharmacy and Public Health.

THE EUROPEAN CREDIT TRANSFER SYSTEM AT MU-SOFIA

1. Ministry of Education and Science Regulation 21/30.09.2004 constitutes that a credit system will be adopted for all MU Sofia students.
2. Each student at the university has to have 60 credits per year from the following:
 - Compulsory courses
 - Involvement in scientific research programs
 - Involvement in scientific reports
 - Elective courses (modules)
3. Credits are a digital representation of a student's time in class and the learning outcomes of their study. Credits are awarded to students with pass grades higher than 3 (Satisfactory) earned through exams or other forms of evaluations for accumulated knowledge and skills according to the education plan. Each student is given information on elective courses, reflecting the subject of the courses and credits.
4. Every student has the right to choose from the elective courses according to personal interest. The accumulation of credits is mandatory for all students.
5. Instruction in the elective courses is organized by the Faculty Head and by the corresponding department. The topics and schedules for each class are presented in the Dean's Office in the beginning of the school year.
6. The Faculty Heads present participants with certificates and provide the Dean's Office with a list of the students who have successfully completed the course at the end of the academic year. The Faculty Heads are required to fill in the Student Card and the Main Book in time with the elective courses and credits for each student, so that the student can be registered in the academic report.
7. In order for the student to be awarded credits from participating in a scientific research, the student has to provide the Education Department at the Dean's Office a copy of a resume, publication and/or projects and an official affirmation from the Department or Project Head that the student has indeed been part of the project/research in the time period.
8. If the student does not accumulate the necessary credits for the school year, the completion of the year can be authenticated provisionally. In this case, the necessary credits have to be obtained in the following year.
9. Signing up for an elective course or a project needs to be done in the corresponding department or with the corresponding Class or Project Head.

Description of the institutional grading system

Local grade	Local definition	ECTS grade
6	Excellent	A
5	Very Good	B
4	Good	C
3	Satisfactory	DE
2	Poor (Fail)	FX
		F

Medical University – Sofia - Rectorate

15, Akad. Ivan Geshov Blvd. 1431 Sofia,
Bulgaria

Rector

Prof. Dr. Victor Zlatkov, MD, PhD
Tel. (+359-2) 9523 791, Fax (+359-2) 9532 816
E-mail: rector@mu-sofia.bg

Vice Rector in Charge of Students' Education

Prof. Tihomira Zlatanova, MD, PhD
Tel. (+359-2) 9523 798, Fax (+359-2) 9532 898
E-mail: raduch@mu-sofia.bg

Vice Rector in Charge of Science and Research

Prof. Valentina Petkova, PhD, DSc
Tel. (+359-2) 9152 163, Fax (+359-2) 954 11 53
E-mail: muscience@abv.bg

Vice Rector in Charge of Post-graduate Studies and University-Hospital Coordination and International Integration and Project Funding

Prof. Radomir Ugrinov, DDM, PhD, DSc
Tel. (+359 2) 9152 180, Fax: +359 2) 9152 167
E-mail: ugrinov@gmail.com

Head of International Integration and Project Funding Department

Prof. Radoslav Girchev, MD, PhD, DSc
Tel. :(+359 2)9152 165, 8510892
E-mail: r.girchev@mu-sofia.bg

Erasmus Office

Institutional Erasmus & ECTS Coordinator:

Savena Borisova, PhD
Tel. (+359-2)9152 138
E-mail: sborisova@mu-sofia.bg

Simeon Manolov - smanolov@mu-sofia.bg, tel.: +359 2 9152 138
Tanya Todorova - tanyasvetoslavova@abv.bg, tel.: +359 2 9152 165

GENERAL PRACTICAL INFORMATION

Academic calendar

The academic year at the Medical University runs from mid-September to late December (Autumn semester) and from mid-February to the beginning of June (Summer semester). Mid-year examinations are from the beginning of January to the beginning of February. Summer examination session is from mid-June to mid-July.

The academic year is as follows: *Autumn semester*: mid- September to December 28

Summer semester: mid- February to May 31

Official holidays

January 1 – New Year

March 3 – Bulgaria’s liberation from Ottoman rule – the National

Day Easter – usually one week after the Catholic Easter May 1 –

Labour Day

May 6 – Bulgarian Army Day

May 24 – Day of Bulgarian Enlightenment and Culture and the Slav

Script September 6 – Bulgaria’s Unification

September 22 – Independence Day

December 24, 25, 26 - Christmas

Categories of International Students

The two main categories of students from abroad seeking admission to Medical University - Sofia are described below. It is important that you know what group you belong to so that you will understand what applies to you as to housing, admission conditions, requirements for prior knowledge of Bulgarian language etc.

1. *Exchange students in the frame of the Erasmus programme (Erasmus Incoming Students).* Exchange students under a bilateral agreement between Medical University and your home University are expected to study at MU-Sofia for a limited time, not more than a year, and not less than three months. Students should have good command of Bulgarian language, since instruction at the University is in Bulgarian. However departments are prepared to offer small groups teaching also in English and French. Each foreign student will also have a Bulgarian student helping in linguistic and other practical problems. The International Relations Office of the University is responsible for finding accommodation for students belonging to this category.

2. *Foreign students.* Foreign citizens are admitted to Medical University – Sofia in accordance with the Law on Higher Education and Ordinance on the State Requirements for Admitting of Students in the Institutions of Higher Education in Republic of Bulgaria if they have completed secondary education that makes them eligible to continue their education in their home country and if they **have grades in Biology and Chemistry in their secondary education diploma or in equivalent of the diploma for secondary education document.**

The preparatory academic year is organized and carried out by the Centre of Language training Physical Education and Sports at Medical University – Sofia and includes courses in

Bulgarian language and English language and language train on Biology, Chemistry, Anatomy and Physiology only for Language Education needs.

Foreign citizens who speak Bulgarian or English language pass a test-exam for evaluating the level of their language proficiency.

Detailed description of the Procedure for admission and the required documents could be found on the website of the Medical University – Sofia on the following link: <http://mu-sofia.bg/en/node/384>.

Admission to and Registration with the University of Erasmus Incoming Students

Students wishing to take a short period of study at Medical University - Sofia in the framework of the Erasmus Programme should send to the International Office of MU-Sofia:

- ▶ The standard Student Application Form
- ▶ The Learning Agreement
- ▶ Three passport photographs
- ▶ Valid transcript of academic records

The completed forms should be sent until July 30th for students coming for the entire academic year or for the first semester of the respective academic year only, and by December 15th for students coming for the second semester. All students must register with the respective Faculty offices. Upon arrival all incoming students should report to the Office of International Relations at the University. For the application to be accepted, the Medical University - Sofia must be satisfied that the student has adequate background knowledge and academic ability to pursue successfully the proposed programme of study. Erasmus students do not pay for their tuition, but will have to pay for the accommodation.

Host country formalities

According to the Law of Foreigners Stay in the Republic of Bulgaria every foreigner may enter the country with a valid passport and an entry visa for Bulgaria. Entry visas are issued in all Bulgarian diplomatic missions abroad. No visas are required from citizens of countries from the European Union and a number of other countries as well. Upon arrival in Bulgaria every foreigner (if not accommodated in a hotel) should register in the Passport Service for Foreigners (Sofia, 48 Maria Louisa Blvd.) to receive a residence permit. Those foreigners who are admitted as students in the University should present their documents for admission issued by the University.

Accommodation

Accommodation for Erasmus Incoming students can be arranged in several ways:

- <http://mu-sofia.bg/en/node/384> *Students' residence* - Students, coming to the University of Medicine in the frame of the Erasmus programme, can use the students' residence. Limited number of rooms is available – first come, first served. Please state your preference in the Application Form.
- *Private flats* - The most common alternative for foreign students is to rent a furnished room or a flat within easy reach of the university on a monthly fee. The cost depends on the size, comfort, location of the housing and varies from 200€ - 350 € (monthly). The rent excludes expenses for electricity, phones, central heating.

Private rooms - Contact Erasmus Student Network (ESN) – Bulgaria for help with the accommodation for finding private rooms from 80 – 150 Euros (monthly). The rent excludes expenses for electricity, phones, central heating. For more details contact:

<http://www.esnbg.org/>; <https://www.facebook.com/esnbulgaria>; e-mail: bulgaria@esnbg.org

The International Office of the University will help incoming Erasmus students in finding the accommodation those suites their preferences best: <http://mu-sofia.bg/en/node/639>

Banks and Currency exchange

The Bulgarian currency is called *lev* (pl.leva), which equals 100 stotinki. Banknote denominations include 2, 5, 10, 20, 50 and 100 leva, as well as coins of smaller denominations. The exchange rate to the USD and other currencies is announced every day. One Euro is equal to 1, 95583 leva. Many local banks and currency exchange offices function in the capital and in the big cities as well. Big international banks have offices in Sofia: BNP-Dresdner Bank, Raiffiesen Bank, ING Bank, National Bank of Greece, Societe Generale, Paris Bank etc. Near the university main building, there are branches of Bulgarian banks - First Investment Bank, BulBank etc. The banks are usually open between 9.00 a.m. and 4.00 p.m. Students may use their international debit or credit cards – Visa, MasterCard, American Express and others – to draw money from cash machines for payment of all standard services in hotels, restaurants, big shops, plane tickets.

Catering facilities

The various catering establishments in Sofia can satisfy the different tastes and needs of its visitors. Along with local specials Italian, Chinese, Indian, Mexican <http://mu-sofia.bg/en/node/384> food can be found. Most restaurants are open 11.00 a.m. – 24.00 p.m. Around the main university building there are small restaurants and cafeterias offering traditional Bulgarian cuisine, as well as fast food places where you could get a proper meal for as much as 2,50 – 4 Euro. On average daily food expenses could vary, depending on personal choice – from 2,50-10 Euro. All food stores work usually until 19.00 or 20.00. There are also 24 hour open stores, and stores working on Saturdays and Sundays.

Health insurance

Foreign students are advised to get medical insurance in their home country or in one of the numerous Bulgarian insurance companies. It will cover medical treatment and stay at a hospital here, should the need arise. There are many clinics and private medical offices where medical help is offered at quite reasonable price.

Library

All faculties of the Medical University - Sofia provide an access to Internet and e-mail for students in their computer rooms. Moreover, in the Central Medical Library, there is a computer room which offers free access to data bases, Internet, and a number of multimedia products and videos. The Library has a fund of more than 750 000 volumes, offers computer catalogue of the books, issued after 1990, an access to more than 800 periodicals. The Library has a reading room with 35 seats, a student reading room with 40 seats.

Sports facilities

The Medical University has a multipurpose gymnasium, which offers excellent conditions for aerobics, basketball, bodybuilding, badminton, volleyball, and calanetics. The open-air playgrounds are used for football, basketball, and volleyball. Students may use the tennis court and the swimming pool of the sport club "Academic".

Cost of living

To give an idea of the cost of living in Bulgaria, an estimated monthly budget (in BG Leva; exchange rate 1 Euro=1.95 BG Leva) as in 2016 might be as follows:

Item	Expenditure in Euro (average per month)
<u>Food</u>	<u>150 - 250</u>
<u>Accommodation</u>	<u>100 - 250</u>
<u>Local public transportation</u>	<u>11 - 25</u>

FACULTY OF MEDICINE



*Address: 1, St. Georgi Sofijski str.
Sofia-1431, Bulgaria*

<http://www.medfac.acad.bg>

Dean: Prof. Ivan Mitov, MD, PhD, DSc, Correspondent member of the Bulgarian Academy of Sciences *Tel. (+359-2) 9521-046,
E-mail: dean@medfac.mu-sofia.bg*

Faculty Coordinator: Assoc. Prof. Dr. Nina Belova, PhD
*Tel. (+359-2)9172 624, Fax (+359-2) 952 03 37
E-mail: n_belova@abv.bg*

The complete course of education in medicine lasts for six years organized in three stages, consisting of pre-clinical and clinical studies. The first stage - preclinical training gives the students the necessary biological and medical knowledge, providing basis for their clinical instruction. The second stage - clinical training aims at acquiring knowledge for diagnostics and treatment. The instruction is being done in a cyclic way after the third academic year. The third stage – pre-graduation internship, is carried out at departments of the University hospitals and aims at applying the knowledge at the patient bedside and at the outpatient's clinics. The study terminates with five state examinations in Internal Medicine, Surgery, Pediatrics, Obstetrics and Gynecology, and Hygiene and Ecology. The successful graduates are conferred the "Master" degree and qualification "Physician"

The first year of the programme covers subjects such as Anatomy and Histology; Cytology; Biology; Physics; Chemistry; Medical Ethics; Latin language; Foreign Language.

The second year is dedicated to continuation of Anatomy and Histology, Foreign language and the subjects Biophysics; Biochemistry; Physiology; Medical Informatics and Biostatistics; Social Medicine; General Medicine, and Medical Psychology and History of Medicine.

The third year is the beginning of the clinical years with Propaedeutics of Internal Medicine; General and Operative Surgery, the other subjects being Medical Genetics; Pharmacology; Pathophysiology; General Pathology; Medicine of Disasters, and continuation of Social Medicine and Microbiology.

In the fourth and fifth years, the education is in cycles and covers the subjects Roengenology and Radiology; Oto-Rhino-Laryngology; Hygiene, Ecology and Occupational Diseases; Clinical Pathology; Ophthalmology; Neurology; Obstetrics and Gynecology; Clinical Pharmacology; Dermatology and Venerology; Internal Diseases; Clinical Laboratory and Clinical Immunology; Surgery; Orthopedics and Traumatology; Pediatrics.

In the sixth year the cycles are in Psychiatry; Urology; Anesthesiology and Reanimation; Epidemiology, Infectious Diseases, Medical Parasitology and Tropical Diseases; Physical Therapy and Rehabilitation; Forensic Medicine and Deontology. The programme also includes clinical clerkships in Internal Medicine, Surgery; Pediatrics; Obstetrics and Gynecology; General Medicine; Hygiene, Infectious Diseases, Epidemiology and Social Medicine.

The opportunity for medical graduates to study for postgraduate qualifications in 52 basic specialties is also available. The education lasts from 3 to 5 years carried out according to a programme and concludes with final examination in front of a State Examination Commission.

The Faculty of Medicine has 47 departments and clinical centers and has at its disposal considerable scientific potential and sophisticated equipment for carrying out educational, diagnostic and curative, and scientific activities.

DISCIPLINES

BIOLOGY: ECTS credits 8,2

Horarium:

Semester 1	Lectures	45	Weeks	15
	Practicals	30	Weeks	15
Semester 2	Lectures	30	Weeks	15
	Practicals	30	Weeks	15

Contents: Structure of the living organism, heredity, variation, immunological homeostasis. Sexual reproduction; individual development. Biological evaluation. Antropogenesis. Ecology. Evolution of invertebrates with elements of medical parasitology. Comparative anatomy of invertebrates. Normal human and animal karyotype. Methods of population genetics. Incidence of mutations, selection, migration, isolation, genetic drift, inbreeding coefficient. Immune genetics.

Assessment: Written and oral, semester 2nd

MEDICAL PHYSICS: ECTS credits 5,8

Horarium:

Semester 1	Lectures	15	Weeks	15
	Practicals	15	Weeks	15
Semester 2	Lectures	30	Weeks	15
	Practicals	30	Weeks	15

Contents: Mechanics, acoustics, molecular physics. Electricity and magnetism. Optics. Ionization radiation. Measurements during microscopy. Evaluation of the microscopic object mean size. Photometric parameters and measurements. Refractions in liquids. Principles of the optical atomic and molecular spectral analysis. Activity of the radioactive source. Radionuclide semi-decay period. Main parameters in medical radiology.

Assessment: Written and oral - practical and theoretical, semester 2nd

MEDICAL CHEMISTRY: ECTS credits 5,8

Horarium:

Semester 1	Lectures	15	Weeks	15
	Practicals	15	Weeks	15
Semester 2	Lectures	30	Weeks	15
	Practicals	30	Weeks	15

Contents: Chemical linkage and structure of the molecule. Complex compounds: structure and function. Chemical kinetics. Enzyme catalysis. Chemical equilibrium. Disperse systems. Acid-base equilibrium. Hydrolysis. Buffers. Electron transfer processes. Biological oxidation. Relationship between the structure and features of the organic substances. Lipids, phospholipids, carbohydrates, amino acids and nucleic acids: structures and features. Heterocyclic compounds. Compounds possessing steroid skeleton.

Assessment: Written and oral - practical and theoretical, semester 2nd

LATIN LANGUAGE: ECTS credits 4,9

Horarium:	Practicals	60Hours per week	2	Weeks	30
Semesters:	1 and 2				

Objectives: General knowledge of the Latin language in the field of medicine.

Contents: Substantives and adjectives with their declension. Word formation, prefixes, suffixes and terms of Latin and Greek origin. Prescriptions - general principles, abbreviations. General principles in the clinical nomenclature and officinal forms.

Assessment: Current control – oral and written, semester 2nd.

HUMAN ANATOMY AND HISTOLOGY: ECTS credits 21, 0

Horarium:

Semester 1	Lectures	30	Weeks	15
	Practicals	30	Weeks	15
Semester 2	Lectures	45	Weeks	15
	Practicals	75	Weeks	15
Semester 3	Lectures	45	Weeks	15
	Practicals	75	Weeks	15
Semester 4	Lectures	45	Weeks	15
	Practicals	30	Weeks	15

Semesters: 1, 2, 3 and 4

Contents: Bone and muscular system. Digestive system. Respiratory system. Urinary system. Reproductive system. Endocrine system. Cardiovascular system. Lymphatic system and the organs of haematopoiesis. Central nervous system. Autonomous nervous system. Skin and the breasts. Sensory organs. Topographic anatomy of the head, neck, trunk, upper and lower extremities.

Assessment: Written and oral - practical and theoretical, semester 4th

HUMAN CYTOLOGY, GENERAL HISTOLOGY AND EMBRYOLOGY: ECTS credits 6,6

Horarium:	Lectures	45	Weeks	15
	Practicals	45	Weeks	15

Semester: 1

Contents: General principles of the cytological and histological examination, external and internal morphology of the cell. Cell membrane, membrane cellular organelles, nonmembrane cellular organelles. Physiology of the cell. General histology. General embryology.

Assessment: Written and oral, semester 1st

BIOPHYSICS: ECTS credits 4,0

Horarium:	Lectures	30	Weeks	15
	Practicals	45	Weeks	15

Semester: 3

Contents: Biophysics of the complex sensory systems. Biological thermodynamics. Biological membranes. Transport processes. Electrogenesis in the living cells. Electrokinetic phenomena. Free radicals in the living systems. Biomechanics phenomena.

Assessment: Written and oral, semester 3rd

MEDICAL PSYCHOLOGY: ECTS credits 1,2

Horarium:	Lectures	15	Weeks	15
	Practicals	15	Weeks	15

Semester: 3

Contents: The course aims to acquaint students with the contribution that the science of psychology has to the medical practice. Students acquire basic skills to establish a therapeutic conduct, therapeutic communication, needed for therapeutic collaboration .

Assessment: Written and oral, semester 3rd

MEDICAL BIOCHEMISTRY: ECTS credits 10.4

Horarium:

Semester 3	Lectures	60	Weeks	15
	Practicals	45	Weeks	15
Semester 4	Lectures	60	Weeks	15
	Practicals	45	Weeks	15

Contents: Enzymes. Biopolymers (proteins and nucleic acids). Bioenergetics. Citric acid cycle. Glycolysis. Carbohydrate metabolism. Metabolism of lipids. Aminoacid metabolism. Relationship between different metabolic pathways. General regulation of metabolism in the organism. Hormones, growth factors, cytokines: molecular mechanisms of the action. Molecular mechanisms of diabetes. Liver biochemistry. Muscular tissue biochemistry. Molecular biology and pathology. Carcinogenesis. Molecular genetics.

Assessment: Written and oral, semester 4th

PHYSIOLOGY: ECTS credits: 12.0

Horarium:

Semester 3	Lectures	45	Weeks	15
	Practicals	60	Weeks	15
Semester 4	Lectures	60	Weeks	15
	Practicals	60	Weeks	15

Semesters: 3 and 4

Contents: Physiology of the synapse. Physiology of the striated muscle. Physiology of the smooth muscle. Physiology of the cardiovascular system. Electrocardiography. Hemodynamic. Pressure in the vascular system. Microcirculation. Blood. Regulation of erythropoiesis. Respiration. O₂ and CO₂ blood transport. Digestion. Motor function, control by the nervous system and blood circulation. Physiology of the kidney. Transport processes in the renal tubules. Endocrine function of the kidney. Physiology of the neuron. Physiology of the receptors and general principles of sensory system function. Integrative function of the cortex. Basic neurophysiological mechanisms involved in speech. Memory and emotions. General principles of endocrine regulation.

Assessment: Written and oral, semester 4th

MEDICAL INFORMATICS AND BIostatISTICS: ECTS credits 2,3

Horarium:	Lectures	15	Weeks	15
	Practicals	30	Weeks	15

Semester: 3

Contents: Stages in information processing. Information transfer. Computers. Means for information transfer and processing. Computer networks. Logical principles of programming. Disk operation system. WINDOWS operation environment. Databases. Expert systems. Statistic evaluation of the medical and biological phenomena.

Assessment: Evaluation during classes, semester 3rd

MEDICAL ETHICS: ECTS credits 3,2

Horarium:	Lectures	15	Weeks	15
	Practicals	15	Weeks	15

Semesters: 1

Contents: Biological and social dimensions in human life. Health and disease. Medical ethical problems related to the reproductive behavior. Paternalism and autonomy in medicine. Relationships between physician and patient. Physicians' confidentiality. Ethical and deontological dilemmas in medicine. Ethics, law and health policy.

Assessment: Evaluation during classes, semester 1st

BULGARIAN LANGUAGE FOR INTERNATIONAL STUDENTS: ECTS credits 6,3

Horarium: Practicals 120 Weeks 60
Semesters: 1, 2

Contents: The language education in the Medical Faculty is obligatory. The students choose one of the following languages: French, German and Russian. Foreign language education requires the knowledge and skills, acquired during the secondary education. The aims are: To provide knowledge and ability to (1) read and translate specialized literature in the field of medicine, (2) make summaries using the foreign language, (3) carry on conservation on medical problems.

Assessment: Evaluation during classes, semester 4th.

STUDENTS' SPORT: ECTS credits 4,6

Horarium: Practicals 90 Weeks 45
Semesters: 1,2 and 3

Contents: To help students and their teachers to balance weekly the mental load and the emotions, related to sport activities. There are three forms of sport activity: standard term classes; competitive classes; additional courses on water and winter sports after the terms. Term classes: aerobics, badminton, basketball, bodybuilding, volleyball, calanetics, swimming, skiing, tennis, table tennis, and football. Yearly the Department organizes sea and mountain courses during the holidays. The students can practice yachting, sculling, surfing, and swimming. The students can acquire skiing skills (at two different levels) and practice tourism.

SOCIAL MEDICINE: ECTS credits 5, 2

Horarium:

Semester 4	Lectures	30	Weeks	15
	Practicals	15	Weeks	15
Semester 5	Lectures	30	Weeks	15
	Practicals	30	Weeks	15

Semesters: 4 and 5

Contents: General methods of Social Medicine. Sociological information in medicine and health services. Primary sociological information collection. Public health. Physical health as a public health index. Morbidity. Medical and social problems in diseases leading to temporal inability to work and disability. Life style and health. International collaboration and international health organizations. Health care as a social system, fundamentals of health policy and legislation. Types of health care systems. Health care management. Management of human resources in the health institutions. Organizations and effectiveness of the work of physicians. Organization of medical care of population. Social and medical problems in the pensioners and the elderly. Working capacity assessment. Population health culture and behavior.

Assessment: Written and oral, semester 5th

MEDICAL MICROBIOLOGY: ECTS credits 7,7

Horarium:

Semester 4	Lectures	60	Weeks	15
	Practicals	30	Weeks	15
Semester 5	Lectures	30	Weeks	15
	Practicals	30	Weeks	15

Semesters: 4 and 5

Contents: Taxonomy of the bacteria. Morphology of the bacteria. Physiology of the bacteria. Viruses - structure and biological characteristics. Genetics of the bacteria and phages. Chemotherapy - principles. Resistance of the microorganisms. Infection, infectious process, infectious disease. Immunity. Natural resistance. Acquired immunity. Antigens. Antigenic structure of the microorganisms. Immune response. Cellular immunity. Immune pathology. Immunoprophylaxis and immunotherapy. Vaccines and serums – types. Immunization schedule in the Republic of Bulgaria. Immunomodulation.

Assessment: Written and oral - practical and theoretical, semester 5th

MEDICINE OF DISASTERS: ECTS credits 2,3

Horarium:	Lectures	15	Weeks	15
	Practicals	30	Weeks	15

Semester: 5

Contents: General characteristics of the disasters. Organization of the defense of the population. Organization of the medical care in disasters. Planning and management. Radioecology. Biological action of the ionizing radiation in external irradiation. Biological action during radionuclide incorporation into the organism. Principles of the treatment of acute poisoning. Radiation injuries. Methods and means of detection of toxic substances and gas cleaning.

Assessment: Evaluation during classes, semester 5th

MEDICAL GENETICS: ECTS credits 2,9

Horarium:	Lectures	30	Weeks	15
	Practicals	30	Weeks	15

Semester: 5

Contents: Methods of genetic examination. Mutagens and teratogens. Chromosomal diseases. Molecular diseases. Hereditary errors in metabolism. Pharmacogenetics. Immune response genetic control. Genetic polymorphism. Polygene. Inborn malformations. Genetics of mental insufficiency. Genetic predisposition to malignant diseases. Medical genetic consultation. Prenatal diagnostics. Genetic screening and monitoring. Organization of the genetic prevention in the country and the tasks of the medical practitioners.

Assessment: Written and oral, semester 5th

PATHOPHYSIOLOGY: ECTS credits 6,8

Horarium:	Lectures	60	Weeks	30
	Practicals	60	Weeks	30

Semesters: 5 and 6

Contents: Health and disease. Terminal states. General etiology. General pathogenesis. Peripheral circulation and microcirculation. Reactivity and resistance. Immune reactivity. Hypoxia. Inflammation. Fever. Pathological physiology of the blood, respiratory, cardiovascular, and digestive system; liver, urinary, endocrine, and nervous systems.

Assessment: Written and oral, semester 6th

PHARMACOLOGY: ECTS credits 8,6**Horarium:**

Semester 5	Lectures	45	Weeks	15
	Practicals	45	Weeks	15

Semester 6	Lectures	30	Weeks	15
	Practicals	45	Weeks	15

Semesters: 5 and 6

Contents: General principles of pharmacology: pharmacokinetics, drug interaction, toxicology. Chemical mediators: cholinergic and adrenergic transmission and other peripheral mediators. Neurotransmission. Neuropsychopharmacology. Drugs used in treating motor disorders: Epilepsy, Parkinsonism. Central and local anesthetics. Analgetics. Cardiovascular pharmacology. Diuretics. Haemopoiesis. Haemostasis. Anti-coagulants. Pharmacology of the respiratory system. Gastro-intestinal pharmacology. Endocrine system pharmacology. Reproductive system. Chemotherapy: antibacterial, antiviral. Antifungal, antiprotozoal, antihelminthic agents. Cancer chemotherapy. Immunopharmacology.

Assessment: Written and oral, semester 6th

GENERAL PATHOLOGY: ECTS credits 0**Horarium:**

Semester 5	Lectures	30	Weeks	15
	Practicals	30	Weeks	15

Semester 6	Lectures	15	Weeks	15
	Practicals	30	Weeks	15

Semesters: 5 and 6

Contents: Injuries of the cell and intercellular matrix. Necrosis. Circulatory disturbances. Inflammation. Immunotherapy. Compensatory and reparative processes. Tumors. Abnormalities in the development of the organism.

Assessment: 0

PROPEDEUTICS OF INTERNAL DISEASES: ECTS credits 11,6**Horarium:**

Semester 5	Lectures	30	Weeks	15
	Practicals	90	Weeks	15
Semester 6	Lectures	30	Weeks	15
	Practicals	90	Weeks	15

Semesters: 5 and 6

Contents: Initial examination of the patient. History. Status. Physical methods of patient examination. Main syndromes and symptoms in the respiratory system diseases. Main symptoms and syndromes in cardiovascular system diseases. Disease manifestations and methods of examination of the gastrointestinal system. Liver. Bile ducts. Pancreas. Principle symptoms and syndromes. Main diseases. Principle symptoms and syndromes in urinary system diseases; methods of examination. Haematopoetic system. Endocrine system. Insulin-producing apparatus. Diabetes mellitus. Hypoglycaemia. Other disorders of the metabolism. Diseases of the muscles, joints, and bones.

Assessment: Written and oral - practical and theoretical, semester 6th

GENERAL AND OPERATIVE SURGERY: ECTS credits 8,6**Horarium:**

Semester 5	Lectures	30	Weeks	15
	Practicals	45	Weeks	15
Semester 6	Lectures	30	Weeks	15
	Practicals	60	Weeks	15

Semesters: 5 and 6

Contents: Surgical department (clinic) organization and planning. Surgical instruments. Suture materials. Dressing and additional materials. Surgical clothing. Antiseptics and aseptics. Surgical operation. Main procedures and interventions in surgery. Puncture. Sounding. Tomia, incision, excision, stomia, anastomosis, bypass, resection, amputation. Main principles of transplantation. Organ transplantation. Anaesthesia. Local anaesthesia. Pain and pain relief. Resuscitation. Shock. Clinical death. Traumatic diseases. Bleeding. Blood transfusion. Surgery, AIDS, Hepatitis B. Surgical infection. Surgical oncology. Necrosis and gangrene. Ulcer and fistula. Surgical endoscopy. Endoscopic surgery.

Assessment: Written and oral, Semester 6th

IMAGE DIAGNOSTICS, NUCLEAR MEDICINE AND RADIOTHERAPY(Cycle):

ECTS credits 4,0

Horarium: Lectures - 30 hours
Practicals - 75 hours

Study period: Year 4, module teaching system - cycle duration 3 weeks

Contents: Techniques for X-ray examination. Radiological investigation of the central nervous system, urinary tract and bones. Basic theory and principles of the nuclear medicine.

Radio pharmaceuticals. Equipment. Radioimmunologic analysis. Nuclear diagnostics of the urinary tract, respiratory system, cardiovascular system, haematopoietic organs, digestive tract, locomotory system, and nervous system. Radioactivity. Clinical dosimetry. Radio biologic actions of the ionizing radiation. Indications and contraindications for radiotherapy.

Assessment: Written and oral, Year 4th

OTO-RHINO-LARYNGOLOGY (Cycle): ECTS credits 3,6

Horarium: Lectures - 30 hours
Practicals -60 hours

Study period: Year 4, module teaching system - cycle duration - 3 weeks

Contents: Clinical anatomy of the middle and the inner ear. Physiology of the hearing and vestibular analyzers. Acute inflammations of the middle ear. Mastoiditis. Chronic otitis - mesotympanitis, epitympanitis. Otosclerosis. Menier's disease. Extradural and subdural abscess. Deafness and deafdumbness. Clinical anatomy and physiology of the nose. Nosebleed. Acute and chronic rhinitis. Anatomy of the throat. Adenoid vegetations. Tonsillitis. Chronic pharyngitis. Chronic tonsillitis. Clinical anatomy of the larynx. Physiology of the larynx. Acute and subchordal laryngitis. Chronic laryngitis. Laryngeal edema and abscess. Tracheotomy. Laryngeal paralyses. Laryngeal carcinomas.

Assessment: Written and oral - practical and theoretical, year 4th

HYGENE, ECOLOGY AND OCCUPATIONAL DISEASES (Cycle): ECTS credits 6,0

Horarium: Lectures - 45 hours
Practicals - 105 hours

Study period: Year 4, module teaching system - cycle duration - 4 weeks

Contents: Hygienic and ecological problems of population. Climate and weather. Acclimatization. Climatotherapy and climatoprophylaxis. Water and water-supply. Personal hygiene. Mental health. Nutriology and nutrition hygiene. Occupational risk factors and occupational diseases. Physical factors. Micro-climate and nonionizing radiation. Occupational chemical factors. Childhood and adolescence hygiene. Pneumoconioses. Occupational bronchial asthma and chronic bronchitis. Chronic poisoning. Vibration disease. Occupational disorders of the hearing and vestibular analyzers. Occupational disorders of the vision. Occupational accidents and diseases.

Assessment: Written and oral, year 4th .

OPHTHALMOLOGY (Cycle): ECTS credits 3,6

Horarium: Lectures - 30 hours
Practicals - 45 hours

Study period: Year 4, module teaching system - cycle duration - 3 weeks

Contents: Light sensing. Colour sensing. Visual acuity - techniques for examination. Binocular visus. Diseases of the orbital cavity and eyelids, conjunctiva, and lacrimal apparatus, cornea and sclera, vascular cover of the eye, retina, optic nerves, lens and the vitreous body. Glaucoma. Eye injuries. First aid in ophthalmology. Operating theater.

Minimum practical skills: Inspection of the eye-ball and eyelids movement. Examination of the light sensing and adjustment. Color sensing examination using tables. Visual acuity,

perception and projection examination. Tentative perimetry. Forster's perimetry. Focal lighting - simple and combined. Ophthalmoscopy. Retinoscopy. Palpatory investigation of the eye pressure. Eye pressure measurement using Maclakov's tonometer. Refraction and adjustment investigation. Refraction glasses choice by neutralization. Corneal sensitivity investigation. Concomitant and paralytic strabismus differentiating. Manual examination of the orbital edge. Shirmer's tear secretion test. Lacrimal sac pressing out. Color test for lacrimal tract patency investigation (lacrimal tract and nose tests). Upper lid up turning and fornix exposing. Conjunctival cavity bathing. Eye-drop and eye ointment application. Mono- and binocular binding up. Fluorescein coloring of corneal epithelial defects. Mirror-image investigation of the cornea. Deviated cilia epilation. Conjunctival and corneal foreign bodies' removal. Pupillary light reflex examination.

Assessment: Written and oral - practical and theoretical, year 4th.

NEUROLOGY (Cycle): ECTS credits 5,9

Horarium: Lectures - 60 hours
Practicals - 60 hours

Study period: Year 4, module teaching system; cycle duration - 4 weeks

Contents: Reflex activity - pathological changes. Sensitive functions. Motor functions. Autonomic nervous system. Reticular formation and limbic system. Supreme cortex functions. Peripheral nervous system. Cranial nerves. Peripheral nerve diseases. Meningitis. Encephalomyelitis. Demyelinating encephalomyelitis. Borreliosis of the nervous system. Congenital degenerative diseases of the nervous system. Epilepsy. Injuries of the nervous system. Neurologic conditions caused by alcohol abuse. Neurointoxications. Neuroses. Headache.

Minimum practical skills: Clinical examination of the patient with neurological disorders. Diagnosis, differential diagnosis and management of patients with the following most important diseases: acute cerebrovascular disorders (including transportation and outpatient stroke management); epilepsy and status epilepticus; meningitis and other inflammatory diseases of the central and peripheral nervous system; skull and brain injuries - emergency treatment and transportation; myasthenic crisis - emergency management; peripheral nervous system diseases and severe pain syndromes (including polyneuritis and discal hernia) - management and a medical specialists' report. Indications and contraindications for a spinal puncture. Liquor tests interpretation.

Assessment: Written and oral - practical and theoretical, year 4th.

GENERAL MEDICINE (Cycle): ECTS credits 3,2

Horarium: Lectures 15 Week 15
Practicals 15 Week 15

Semester: 4

Contents: Health care organization. Primary health care in the Republic of Bulgaria. Main duties of the General Practitioner in health care, prevention and treatment in general practice. Communication between the physician and the patient. Health management: the General Practitioner as an organizer and main executor of the tasks in the established practice.

Assessment: Evaluation during classes, Semester 4th

CLINICAL PATHOLOGY (Cycle): ECTS credits 8

Horarium: Lectures - 45 hours
Practicals - 60 hours

Study period: Year 4, module teaching system; cycle duration – 4 weeks, in parallel with the cycle Internal Diseases.

Contents: Diseases of the digestive system, liver, gall bladder, and the pancreas, cardiovascular system, respiratory tract, hemopoetic system, lymphatic nodes, endocrine glands, urinary tract, male and female reproductive systems. Diseases related to gravidity and delivery. Diseases of the fetus. Drug related disorders. Diseases of the bones and muscles.

Assessment: Written and oral - practical and theoretical, year 4th .

CLINICAL PHARMACOLOGY (Cycle): ECTS credits 2,4

Horarium: Lectures - 30 hours
Practicals - 30 hours

Study period: Year 5, module teaching system; cycle duration –2 weeks.

Contents: Pharmacokinetic approaches to drug dosage. Drug therapy monitoring. Clinical pharmacodynamics. Clinical chronopharmacology. Clinical pharmacokinetics. Drug administration in gravid and breast feeding women. Drug administration in elderly patients. The disease progress as a factor influencing drug action. Clinically significant drug interactions. Clinical and pharmacological approaches to vigilance treatment optimizing and pain treatment optimizing. Adverse drug reactions. Pharmacoepidemiology. Pharmacoeconomics.

Minimum practical skills: Drug treatment necessity assessment. Appropriate drug choice according to the individual characteristics of the particular patient. Personal drug list development and enlisting the chosen medicine. Preparing of the rationale regimen of the chosen drug. Communicative habits formation to facilitate elucidating benefits and risk of treatment with the chosen drug as well as a mode of administration. Assessment of the effect and the treatment duration.

Assessment: Written and oral, year 5th

OBSTETRICS AND GYNECOLOGY (Cycle): ECTS credits 8,0

Horarium: Lectures - 60 hours
Practicals - 150 hours

Study period: Year 5, module teaching system; cycle duration – 6 weeks.

Contents: Fertilization. Constitutional changes in pregnant women.

Normal delivery. Prematurely pregnancy interrupting. Abortion and premature birth. Hemorrhages during the fetus and placenta delivery. Fetus in jeopardy. Diabetes and pregnancy. Abnormal presentations of the fetus. Geminated pregnancy. Physiology and pathology in the new-born and shielded period. Delivery anaesthesia. Caesarian section. Physical examination in gynecology. Precanceroses and neoplasms of the vulva, vagina and cervix. Extrauterine pregnancy. Myoma of the uterus. Sterility. Childhood and adolescence gynecology. Family planning. Breast diseases. Endometrioses. Congenital diseases of the genital organs. Climacteric. Menopause.

Minimum practical skills: Obstetrics:

History taking and physical examination of the pregnant woman. Fetal sounds auscultation. Endovaginal examination. Basic skills in ultrasound examination. Normal delivery conducting. Participation in cesarean section. Initial management of the new-born. Primary resuscitation of the new-born. Management of the woman in the early puerperium.

Gynecology: History collecting and physical examination in gynecology. Vaginal examination using speculum. Bimanual palpation. Native preparation microscopy. Taking probe for cytological testing. Cytological and histological report analysis. Participation in experimental uterine curettage and rectouterine pouch puncture. Preoperative and postoperative management of the woman. Participation in abdominal and vaginal gynecological surgery.

Assessment: Written and oral -practical and theoretical, year 5th

DERMATOLOGY AND VENEROLOGY (Cycle): ECTS credits 3,6

Horarium: Lectures - 45 hours
Practicals - 45 hours

Study period: Year 5, module teaching system; cycle duration – 3 weeks.

Contents: Physiology and functions of the skin. Treatment of the skin diseases. Skin diseases caused by external agents influence. Eczema. Allergic dermatoses. Papulose and erythematoses-squamose dermatoses. Genodermatoses. Bullose dermatoses. Autoimmune connective tissue diseases. Vascular dermatoses. Skin neoplasms. Diseases of the skin appendices. Mycoses. Bacterial infections of the skin. Dermatoviroses. Venereal diseases. Syphilis. Gonorrhoea. AIDS.

Assessment: W/O, Year 5th

PSYCHIATRY (Cycle): ECTS credits 3,6

Horarium: Lectures - 45 hours
Practicals - 30 hours

Study period: Year 6, module teaching system; cycle duration - 3 weeks.

Contents: Psychiatric procedures – acquainting with and participation in basic psychiatric procedures accepted by the corresponding clinic.

Therapeutic communication – the emphasis is on the confidence forming and susceptibility enhancing as prerequisites for interview or session performing.

Clinical skills – training in selected fields of the clinical psychiatric assessment (interview).

Theoretical training – introduction to basic theory of psychiatry needed in daily clinical practice. Training programmes based on the active participation of the students.

Minimum practical skills: Therapeutic communication. Preadmission examination. Following up. Psychological test performing. Case report. Therapeutic programme formulation. Individual session. Compulsion exerting. Team session. Case discussion. Supervision. Depression, anxiety, suicide intention, psychosis, relapse, delirium, dementia, and drug side effects assessment. Collaboration with psychologist.

Assessment: W/O, Year 6th .

INTERNAL DISEASES (Cycle): ECTS credits 21,6

Horarium:	Lectures -	150 hours
	Practicals -	360 hours

Study period: Module teaching system during the fourth and fifth academic year; cycle duration 18 weeks, including preliminary examination at the end of each cycle.

Contents:

Cardiology

Chronic congestive heart failure. Acute heart failure. Cardiogenic shock. Rhythm and conduction disturbances. Heart valve diseases. Atherosclerosis and ischemic heart disease. Myocardial infarction. Essential systemic hypertension. Secondary hypertension. Infectious endocarditis. Myocarditis and cardiomyopathies. Acute and chronic pericarditis.

Gastroenterology

Instrumental examinations and laboratory tests in gastroenterology. Esophageal, stomach, and duodenal diseases. Chronic diseases of the liver. Diseases of the pancreas. Differential diagnosis of the jaundice. Diagnosis and treatment of the intestinal diseases. Diagnostic algorithm and management of gastrointestinal neoplasm.

Nephrology

Acute glomerulonephritis. Chronic glomerulonephritis. Concomitant nephropathies. Pyelonephritis. Interstitial nephropathies. Acute renal failure. Chronic renal failure.

Pulmonology

Chronic obstructive pulmonary disease (COPD). Treatment of the bronchial obstruction. Pneumonia. Pulmonary carcinoma. Pulmonary tuberculosis.

Endocrinology

Diabetes mellitus. Function and diseases of the hypothalamus and the pituitary gland. Adrenal glands – function and diseases. Diseases of the thyroid gland.

Hematology

Anemia. Leukemia. Lymphomas. Paraproteinemia. Hemorrhagic diathesis. Thromboembolism.

Allergology

Basic theory of pathogenesis and treatment of allergic diseases. Bronchial asthma. Medicamentous allergy. Anaphylactic shock and serum disease. Treatment of the allergic diseases.

Rheumatology

Rheumatoid arthritis. Collagenosis.

Toxicology

Acute exogenous poisoning. Drug toxicity. Poisoning with industrial and home-made toxins.

Assessment: Written and oral, preliminary examination at the end of each cycle. Final examination in the 5th academic year.

CLINICAL LABORATORY (Cycle): ECTS credits 2,4

Horarium:	Lectures -	30 hours
	Practicals -	30 hours

Study period: Year 5, module teaching system, cycle duration – 2 weeks.

Contents: Hematologic laboratory tests of peripheral blood samples. Laboratory tests of the bone marrow. Cytochemical and cytometric techniques. Laboratory diagnosis of the red blood cell diseases. Laboratory diagnosis of leukemia and other diseases of the white blood cells.

Clinical and laboratory testing of blood clotting and fibrinolysis. Water balance and osmolality. Electrolyte and microelements testing. Protein detecting in biological fluids. Albuminuria. Laboratory testing of patients with renal diseases. Enzyme detecting in biological fluids. Laboratory determination of lipids and lipoproteins. Carbohydrate metabolism disturbances investigation. Hormone determination in biological fluids. Drug monitoring and toxicology. Laboratory diagnosis of malignant neoplasms, genetic and multifactorial diseases.

Assessment: Evaluation during classes year 5th.

CLINICAL IMMUNOLOGY (Cycle): ECTS credits 1.2

Horarium: Lectures - 15 hours
Practicals - 15 hours

Study period: Year 5, module teaching system, cycle duration – 1 week

Contents: Immune deficiency diseases. Autoimmunity and autoimmune diseases. Immunologic aspects of renal and gastrointestinal diseases, hepatic and biliary immune-mediated diseases. Lymphoproliferative and hematologic diseases. Transplantation immunology. Immunology of neoplasm growth.

Assessment: Evaluation during classes year 5th

SURGERY (Cycle): ECTS credits 10,8

Chest and cardiovascular surgery – 3.4
ECTS credits Year 5 – 7.0, cycle duration – 6 weeks
Abdominal, neck, and breast surgery – 5.3
Face surgery - 0.5
Pediatric surgery - 0.7
Neurosurgery – 0.5

Horarium: Lectures - 90 hours
Practicals - 180 hours
Clinical attachment - 60 hours

Study period: Module teaching system during the fourth and fifth academic year, cycle duration 8 weeks, including preliminary examination in the 4th and final examination in the 5th academic year.

Contents:

Fourth academic year:

Chest surgery - Lung cysts and neoplasms. Diseases of the pleura. Mediastinal diseases. Esophageal and diaphragm diseases. Chest injuries – blunt and opened.

Cardiovascular surgery - Acute chronic venous and arterial insufficiency. Surgery in congenital and acquired heart diseases.

Fifth academic year:

Abdominal, neck, and breast surgery - Multiple and combined injuries. Ileus. Acute and chronic appendicitis. Peritonitis. Acute pancreatitis. Congenital, traumatic, and inflammatory diseases and neoplasms of the neck. Thyroid gland diseases. Breast diseases. Ulcer diseases. Precanceroses and carcinoma of the stomach. Cholelithiasis. Cholecystitis. Echinococcosus and abscess of the liver. Hepatic and extrahepatic biliary system neoplasms. Spleen diseases.

Pancreas neoplasms. Neoplasms of the bowel. Hemorrhoids. Fistula. Paraproctitis, dermoid cysts. Rectal carcinoma.

Face surgery

Pediatric surgery - Acute appendicitis, peritonitis, and intussusception in childhood. Acute purulent diseases of the lung and the pleura in childhood. Congenital diseases of the esophagus, small intestine and the bowel.

Neurosurgery - Injuries of the skull and the brain. Brain tumors. Injuries of the spinal cord and the periphery nerves.

Assessment: Written and oral, preliminary examination in the 4th year and examination in 5th year.

NEUROSURGERY (Cycle): ECTS credits 1,2

Horarium: Lectures - 10 hours
Practicals - 20 hours

Study period: Module teaching system during the fifth academic year.

Contents:

Neurosurgery - Injuries of the skull and the brain. Brain tumors. Injuries of the spinal cord and the periphery nerves.

Assessment: Written and oral examination in 5th year.

ORTHOPEDECS AND TRAUMATOLOGY (Cycle): ECTS credits 3,6

Horarium: Lectures - 30 hours
Practicals - 60 hours

Study period: Year 5, module teaching system, cycle duration – 3 weeks.

Contents: Clinical examination in orthopedics and traumatology. Basic operative and non-operative curative techniques. Instruments in orthopedics and traumatology.

Aseptic necrosis. Congenital hip dislocation. Bone neoplasm. Degenerative disorders and inflammatory diseases of the bones and muscles. Curative techniques in patients with distortion, luxation, and fractures. Humeral, elbow, forearm and palmar fractures and luxations. Pelvic and coxofemoral fractures and luxations. Leg fractures and luxations. Knee injuries. Spinal column fracture and fracture-luxation.

Minimum practical skill: Examination of the orthopedic patient. Dressing. Stitches taking out. Plaster setting performing. Direct and indirect extension techniques application. Large joint puncture. Local corticosteroid application. Preoperative surgeon hands and operative field preparing. Participation in orthopedic surgery. Orthopedic devices application.

Assessment: Written and oral, year 5th.

UROLOGY (Cycle): ECTS credits 2,4

Horarium: Lectures - 15 hours
Practicals - 30 hours

Study period: Year 6, module teaching system, cycle duration – 2 weeks.

Contents: Urogenital system abnormalities. Urolithiasis. Urogenital neoplasms. Prostate gland adenoma and carcinoma. Inflammatory diseases of the urogenital system. Urogenital tuberculosis. Andrologic problems in urology.

Assessment: Evaluation during classes in year 6th.

ANESTHESIOLOGY AND REANIMATION (Cycle): ECTS credits 3.6

Horarium: Lectures - 30 hours
Practicals - 45 hours

Clinical attachment - 22.5

Study period: Year 6, module teaching system, cycle duration – 3 weeks.

Contents: Kinds of anesthesia. General anesthesia. Inhalatory anesthesia. Equipment. Inhalatory anesthesia conduction. Muscle relaxants. Intravenous anesthesia. Neuroleptanalgesia. Total intravenous anesthesia. Clinical application of the contemporary anesthetics. Local anesthetics. Preoperative, operative and postoperative resuscitation. General response of the organism to an injury. Homeostasis. Infusion therapy. Definition of the terms water-electrolyte balance, protein balance, base-acid balance, and caloric balance. Enteral, parenteral and mixed feeding. Syncope, collapse and shock. Hypovolemia. Management of the shock. Hemotransfusion. Drug treatment. Acute respiratory disorders. Methods of outpatient and hospital artificial respiration. Acute circulatory disorders. Apparent death. Anesthesia and intensive care in obstetrics and gynecology.

Assessment: Evaluation during classes, year 6th

PEDIATRICS (Cycle): ECTS credits 8,4

Horarium: Lectures - 90 hours
Practicals - 120 hours

Study period: Year 5, module duration system, cycle duration – 6 weeks.

Contents: Contemporary clinical and prevention problems of pediatrics. Physiologic peculiarities of the water – electrolyte balance in children. Physiology of the immunity. Immune deficiency disorders in children. Genetic problems in pediatrics. Cytological diagnosis. Prenatal prevention of the congenital disorders. Neonatal pathological conditions. Jaundice in infants and children. Physiology and pathology of the puberty. Rachitis and rachitis-like conditions. Childhood pneumonopathies. Bronchial asthma. Congenital heart diseases. Myocarditis. Connective tissue disorders. Anemia in children. Reactive arthritis and spondylarthropathia. Hemorrhagic diatheses. Leukemia and malignant lymphoma. Oncological diseases in childhood. . Acute and chronic diarrhea in childhood. Infusion therapy. Chronic hepatitis and liver cirrhosis. Acute glomerulonephritis. Hematuria in children. Chronic nephritis. Nephrosis. Endocrine disorders in children. Carbohydrate metabolism disorders. Diabetes. Convulsion disorders; coma in children. Heart failure in newborn and infants.

Minimum practical skills: History taking and physical examination of the newborn, infants and children. Anthropometric determination performing. Thyroid gland palpation. Blood pressure measurement in children. Sputum sampling. Peripheral blood count. Bone marrow sampling. General and sterile urine sampling and testing. Joint physical examination (edema, local temperature, motion capacity, circumference and angle measurement). Venous blood

sampling and intravenous drug application. Mantoux test performing and reading. Inserting of central and peripheral intravenous infusion, venous pathway fixation. Oxygen mask setting and control. Urethral catheter inserting. Upper respiratory tract secretion aspiration. Lumbar puncture performing. ECG tracing. Vital signs monitoring. Pulse therapy - conduction and monitoring. Genetic consultation recommending. Genealogical investigation. Physical examination in patients with large and small congenital abnormalities.

Assessment: Written and oral examination at the end of the 5th year.

PHYSIOTHERAPY AND REHABILITATION (Cycle): ECTS credits 2,4

Horarium: Lectures - 15 hours
Practicals - 30 hours

Study period: Year 6, module teaching system, cycle duration – 2 weeks

Contents: Rehabilitation – character, classification, aims, equipment, and contingent. Galvanic treatment. Low frequency and low voltage current treatment. Medium frequency current treatment. Ultrasound. High frequency current. Light. Kinesiatrics. Application in preventive medicine. Natural physical factors – water therapy, balneotherapy, climatotherapy.

Assessment: Evaluation during classes in year 6.

EPIDEMIOLOGY, INFECTIOUS DISEASES, MEDICAL PARASITOLOGY, AND TROPICAL DISEASES (Cycle): ECTS credits 7,2

Horarium: Epidemiology and infectious diseases
Lectures - 60 hours
Practicals - 60 hours
Medical Parasitology and Tropical Diseases
Lectures - 15 hours
Practicals - 15 hours

Study period: Year 6, module teaching system, cycle duration – 6 weeks.

Epidemiology - Theory of the epidemiological process. Epidemiology of the salmonellosis, abdominal typhus and paratyphus A, B and C; diphtheria; influenza and acute respiratory diseases; Eruptive infectious diseases; virus hepatitis, neuroinfections, AIDS, hospital infections; enterovirus infections; chlamydial infections.

Infectious diseases - Infection, infectious process and infectious diseases. Diagnosis and treatment of the infectious diseases. Diarrhea. Salmonellosis, abdominal typhus, paratyphus A,B and C. Diphtheria. Influenza and acute respiratory diseases. Virus hepatitis, Neuroinfections. AIDS. Arbovirus infections. Rickettsial diseases - Q-fever, Marseilles fever. Shigellosis and colibacillosis. Cholera. Clinical manifestations and treatment of the hospital infections. Tetanus, anthrax. Hemorrhagic fever. Lyme disease.

Parasitology - Parasitism. Parasite-host interaction. Epidemiology of parasitoses. Pathogenesis of the parasitoses. Contemporary diagnostic techniques, basic principles of therapy and drug- prevention of parasitoses. Malaria. Blood and intestinal protozoan infections. Tropical parasitoses. Helminthiases. **Tropical medicine** - Mycobacterial and spirochete tropical infections. Arbovirus tropical infections. Penetrating mycoses. Tropical rickettsial and chlamydial infections.

Assessment: Written and oral examination - preliminary examination (parasitology and tropical medicine); examination at the end of the 6th academic year.

FORENSIC MEDICINE AND DEONTOLOGY (Cycle): ECTS credits 3,6

Horarium: Lectures - 30 hours
Practicals - 45 hours

Study period: Year 6, module teaching system, cycle duration – 3 weeks.

Contents: Forensic medicine experts' report in patients with mechanical trauma; transport injuries. Vital and postmortal injuries. Forensic medicine corpse investigation. Forensic medicine personality identification. Sex, sexual manifestations and sexual crimes. Investigation in contested parenthood, mechanical asphyxia, and poisoning. Medical deontology. Experimental trial in humans. Euthanasia. Medical mistakes and accidents in medical practice.

Minimum practical skills: Forensic medicine experts' report drawing up using forensic medicine record data. A living person certification. Documentation issuing. Preparing of lung native preparation for fatty embolism testing. Histological test sample preparing. A living person and corpse blood sampling for alcohol testing, for chemical testing. Sample preparing for virusological, bacteriological, biological testing. Air embolism testing.

Assessment: Written and oral at the end of the 6th academic year.

OPTIONAL SUBJECTS

MEDICAL PSYCHOLOGY: ECTS credits 1,2

Horarium: Lectures 15 hours
Practicals 15 hours

Semester: 4

Contents: Social situations. Paternalism and partnership. Psychoanalysis. Communication. Clinical interview. Developmental psychology. Family and morbidity. Existential basis of the therapy.

Assessment: Evaluation during classes, year
2nd. ***

I. SUMMER PRACTICE

- after the II-nd semester - 15 calendar days
- after the IV-th semester - 15 calendar days
- after the VI-th semester - 15 calendar days

TOTAL HOURS OF PRACTICE

After the I-st, II-d and III-d year- 45 days, 8 hours per day = 360 hours

PRACTICE AFTER THE TERM II AND

IV Activities

Sanitary treatment of a newly admitted patient – bathing, dressing, getting into a hospital. Hospital bed arranging. Special considerations of surgery, intensive care, and infant patient bed arranging. Patient's household linen changing. Care for in-patient's personal hygiene. Patient feeding. Patient and room preparation for doctor's round. Disinfectant solution preparing and usage. Dressing preparing for sterilization. Linen preparation. An in-patient transportation using a stretcher or sedan-chair. A motionless patient accompanying. Blood group determination. Participation in an on duty report and duty delivering.

PRACTICE AFTER TERM VI

Temperature and pulse frequency measurement. An enema giving. Injections – intravenous infusion setting. Massage performing and compress applying. Secretion sampling, principles of sputum and feces sampling. Principles of blood sampling for microbiological testing Principles of stomach lavage performing. Blood pressure measurement. Formal medical documentation acquainting. Participation in scientific meetings. Plaster dressing and splinting. Assisting in surgery interventions.

II. CLINICAL PRACTICE AND PRE-GRADUATE INTERNSHIP

IV-th and V-th year and VI-th year /module system/

92 weeks 5 working days per week - 460 working days

460 working days; 2 hours per day - 920 hours = 115 days

VI-th year – pre-graduate internship

240 calendar days; 8 hours per day -1920 hours

**TOTAL: CLINICAL PRACTICE AND
PRE-GRADUATE INTERNSHIP - 2 840 hours**

III. ALLOCATION OF PRE-GRADUATE INTERNSHIP (in calendar days)

Internal Diseases	- 30 days
Surgery	- 30 days
Obstetrics and Gynecology	- 30 days
Pediatrics	- 30 days
Hygiene, Infectious Diseases, Epidemiology and Social Medicine Emergency Medicine	- 35 days - 20 days
General Medicine Examination Sessions	- 15 days - 50 days
TOTAL	240 days

Clinical practice on a module system - 115 days

**TOTAL pre-graduate
Internship and clinical practice 355 days**

Pre-graduation internship scored on three variables:

1. Clinical knowledge and skills – history collection and physical examination; diagnosis formulation (plan for diagnosis and diagnostic tests making; clinical diagnosis basing); patient therapeutic plan making.
2. Practical skills – medical manipulations, instrumental diagnostic and therapeutic procedures, performing of different imaging diagnostic procedures and image analysis, risk assessment and ways for its diminishing. Each student must perform at least 4 different manipulations, chosen by the lecturer.
3. Theoretical knowledge – test examination including one or two clinical cases, situation problem and specific questions.

**GRADUATION EXAMINATIONS
(STATE CERTIFICATION EXAMINATION)**

Graduation examinations (including internal diseases, surgery, obstetrics and gynecology, pediatrics, and hygiene, epidemiology, infection diseases and social medicine) are to be passed at the end of the corresponding probation. Students who pass the state examinations are awarded a Master's degree and the qualification of "doctor in medicine" with the right for general medical practice.

The elective courses/modules for the respective Academic Year are published on the official website of the Faculty of Medicine- Sofia – <http://medfac.mu-sofia.bg>

FACULTY OF DENTAL MEDICINE

Address: 1, St. Georgi Sofijski Str.

Sofia – 1431, Bulgaria

<http://www.fdm.mu-sofia.bg/>

Dean: Prof. Dr Andon Filtchev, PhD, DDS

Tel.: +359 2 952 – 35 48, Fax: +359 2 952 – 1506

E-mail: fdent@abv.bg

Faculty Coordinator: Prof. Dr. Bozidar Yordanov, PhD

Tel.: +359 2/954 13 93 +359 2/541-202, Fax: +359 2/952-1506

E-mail: yordanov_doc@abv.bg



The Faculty of Dental Medicine was founded by the Decree №32/June 24th, 1942 of His Majesty King Boris III. The Faculty of Dental Medicine is the first autonomous and accredited institution of higher education in Bulgaria providing training of dental medicine doctors, awarding Masters Degree.

From its start in 1942 until now, 15 703 students were trained and the faculty was graduated by 10 076 Bulgarian and 842 foreign students from 58 countries in Europe, America, Asia, Australia and Africa.

The Faculty of Dental Medicine is renovated with 208 new dental units. There are two auditoriums, seminar halls, research library, pre-graduation training base, post-graduate students' dental surgeries, pre-clinical practice training rooms, clinical practice training rooms equipped with phantom heads, dental technician laboratory, etc. There are a number of well functioning students' research circles and research projects.

The education plan and programmes are in accordance with the directives of the European Union. Currently, 125 highly qualified regular lecturers and teachers work at the Faculty of Dental Medicine.

The education of students in dental medicine is organized in three stages with duration of five years and six months as pre-graduate probation. During the first two years students receive medicobiological training. The clinical and medical training is realized from the second to the

tenth semester and includes education in the profiles of general medical and specialized dental medicine disciplines. The teaching is carried out by 8 departments. The prediploma internship includes pediatric, surgical, therapeutic, prosthetic dental medicine and orthodontics and ends with state examinations. Students who pass them successfully are awarded the qualification of a Doctor in Dental Medicine and a Master's degree.

In the first two years the programme covers subjects such as Human Anatomy and Histology, Human Cytology and Embryology; Physiology, Physics; Chemistry; Biology; Dental and Biomaterials; Biophysics; Computer Science; Latin language, Foreign Language; Biochemistry; Microbiology; Pharmacology; Preclinics of Pediatric Dental Medicine, Preclinics of Conservative Dental Medicine, Preclinics of Prosthetic Dental Medicine; Social Medicine and Medical Ethics, Medical Psychology, Disaster Medicine, Computer Sciences.



Renovated practice training room at the Department of Conservative Dental Medicine

In the third year the subjects are: General and Clinical Pathology Pathological Anatomy; Pathophysiology; Pharmacology; Propaedeutics of Prosthetic Dental Medicine; Clinics of Prosthetic Dental Medicine; Preclinics of Pediatric Dental Medicine; Clinics of Pediatric Dental Medicine; Preclinics of Conservative Dental Medicine; Preclinics of Oral and Maxillo-facial Surgery, General Surgery, Hygiene and Epidemiology

In the fourth year the studied subjects are: Diagnostic Imaging; Oto-Rhino-Laryngology; Internal Diseases; Forensic Medicine, Clinics of Prosthetic Dental Medicine; Clinics of Conservative Dental Medicine; Orthodontics; Clinics of Pediatric dental Medicine; Clinics of Oral a Maxillo-facial Surgery, Clinical Dental Allergology; Pediatrics and Infectious Diseases, Obstetrics and Gynecology, Periodontology.



The new Cone Beam Computer Tomograph at the Faculty of Dental Medicine

In the fifth year the subjects are: Clinics of Conservative Dental Medicine; Physiotherapy; Oral and Maxillo-facial Surgery; Dermatology and Venerology; Neurology and Psychiatry; Ophthalmology; Clinics of Prosthetic Dental Medicine; Orthodontics; Clinics of Pediatric dental Medicine; Periodontology.

Students go through training in a number of other disciplines – Dental Physiotherapy, Allergology, Implant Dentistry, Gnathology and Occlusion, Prevention of Dental Diseases, Oral Pathology.

The Faculty carries out specialization in ten specialties: Pediatric Dental Medicine, Prosthodontics, Oral Surgery, Maxillofacial Surgery, Orthodontics, Periodontology and Diseases of Oral Mucosa, Social Medicine and Public Dental Health, General Dentistry, Maxillofacial Radiology and Oral Imaging Diagnostics. The Faculty disposes of the largest library in the field of Dentistry in Bulgaria.

DISCIPLINES

CHEMISTRY: ECTS 4,6

Horarium:	Lectures	45	Weeks	15
	Practicals	30	Weeks	15

Semester: 1

Objectives: Studying the general chemical principles, laws and reactions in relation to the student's future practice.

Contents: Inorganic chemistry: acid-base equilibrium. Electron transfer. Formation of complex compounds. Organic chemistry: Chemical structure – biological activity relationship (SAR). Chemical properties of the basic classes of organic compounds in the living organisms. Chemical properties of many drugs of importance.

Assessment: Current control during the semester – oral and tests, Final examination -written and oral, semester 1st.

PHYSICS: ECTS credits 4,6

Horarium:	Lectures	45	Weeks	15
	Practicals	30	Weeks	15

Semester: 1

Objectives: Studying the physical phenomena connected with medicine and stomatology.

Contents: Physical methods for diagnostics and treatment in medicine and stomatology. Physical phenomena and principles in functioning of the human organs and systems. Principles of human protection from hazardous physical factors. Basic physical concepts, quantities and units used in medicine and stomatology.

Assessment: Oral current control during the semester; final examination - written and oral, semester 1st.

HUMAN BIOLOGY: ECTS credits 5,8

Horarium:	Lectures	45	Weeks	30
	Practicals	60	Weeks	30

Semesters: 1 and 2

Objectives: Getting acquainted with the organization of the living systems and the cellular and molecular principles involved.

Contents: Material nature of life. Heredity and diversity. Living organisms as an integrated system. Immunological homeostasis. Gametogenesis. Ontogenesis. Biological evolution. Genetics of the population. Anthropogenesis. Ecology. Parasitology. Comparative anatomy.

Assessment: Written and oral examination in the 2nd semester.

LATIN LANGUAGE: ECTS credits 4,0

Horarium: Practicals 60Hours per week 2 Weeks 30

Semesters: 1 and 2

Objectives: General knowledge of the Latin language in the field of medicine.

Contents: Substantives and adjectives with their declension. Word formation, prefixes, suffixes and terms of Latin and Greek origin. Prescriptions - general principles, abbreviations. General principles in the clinical nomenclature and officinal forms.

Assessment: Current control – oral and written, semester 2nd.

FOREIGN LANGUAGE (BULGARIAN FOR FOREIGN STUDENTS, ENGLISH INSTRUCTIONS)

ECTS credits: 8

Horarium:

Semesters 1,2 Practicals 120 Weeks 30

Semester 3,4 Practicals 120 Weeks 30

Objectives: To provide knowledge to translate scientific medical literature; learn to make summaries and annotations in the foreign language. Learning medical and stomatological terminology.

Contents: The students learn the specific characteristics of the scientific text. Terms definition. General linguistic functions, themes and thesis.

Assessment: Current control – oral and written in the 4th semester.

COMPUTER SCIENCE: ECTS credits 2,8

Horarium: Practicals 30 Weeks 15

Semester: 2

Objectives: Studying the modern means and methods for information processing.

Contents: Operation systems, text processing systems, data base systems, statistical software.

Assessment: Practical and oral examination, 2nd semester.

HUMAN CYTOLOGY AND EMBRYOLOGY: ECTS credits 4,0

Horarium:

Semester: 1 Lectures 30 Weeks 15

Practicals 30 Weeks 15

Objectives: The students acquire knowledge about the structure of the cell and its parts.

Contents: Structure of the cell and its parts (external membrane, nucleus, cyto-center,

cytoskeleton, cellular organelles). Epithelial tissue. Connective tissue. Blood. Muscle tissue. Nervous tissue. General embryology.

Assessment: Practical and theoretical – written and oral exams.

HUMAN ANATOMY AND HISTOLOGY: ECTS credits 7, 2

Horarium:

Semester 1	Lectures	0		
	Practicals	15	Weeks	15
Semester 2	Lectures	45	Weeks	15
	Practicals	60	Weeks	15
Semester 3	Lectures	30	Weeks	15
	Practicals	90	Weeks	15

Objectives: The students acquire knowledge about the normal structure of the organs and systems of the human body.

Contents: ANATOMY: Skeletal bones and their connection. Muscles, blood vessels and nerves of the extremities. Muscles, vessels and nerves of the head. Muscles, blood vessels and nerves of the trunk. Viscera. Central nervous system and sensory organs. Topographic anatomy of head and neck.

Assessment: Current control – oral and written in the 3rd semester.

BIOCHEMISTRY: ECTS credits 7, 4

Horarium:	Lectures	60	Weeks	15
	Practicals	60	Weeks	15

Semesters: 2 and 3

Objectives: Gaining basic knowledge in biochemistry, molecular biology, and molecular pathology in order to achieve understanding of the human diseases, their diagnostics and treatment.

Contents: Biopolymers. Bioenergetics. Metabolism of carbohydrates, lipids, amino acids and nucleotides, and their interactions. Hormones and mechanism of action. Functional biochemistry: blood, liver, kidney, neural tissue, muscle tissue, bones, teeth. Biochemical basis of nutrition. Molecular biology and molecular pathology. Disturbances of the metabolism.

Assessment: Written and oral examination in the 3rd semester.

BIOPHYSICS: ECTS credits 2,8

Horarium:	Lectures	15	Weeks	15
	Practicals	15	Weeks	15

Semester: 3

Objectives: General physical and physicochemical principles in the biological systems based on precise quantitative methods. Gaining knowledge on the modern cellular biophysics' achievements, as well as of the theoretical principles of diagnostic and therapeutic methods in stomatology.

Contents: Thermodynamics of biological processes. Structure, dynamics and functioning of biological membranes. Transport of substances through biological membranes. Mechanisms of

biopotentials. Passive electrical properties of cells and tissues and their utilization in the therapeutic and diagnostic practices. Free radicals in the living systems.

Assessment: Current control – oral and tests, Final examination -written and oral, semester 3rd.

HUMAN PHYSIOLOGY: ECTS credits 7,6

Horarium:

Semester: 3	Lectures	30	Weeks	15
	Practicals	45	Weeks	15
Semester: 4	Lectures	30	Weeks	15
	Practicals	45	Weeks	15

Objectives: Teaching the relationship between human organism and its interaction with the environment.

Contents: General principles of regulation in the human body. Homeostasis. Transport through cellular membranes. Physiology of excitable tissue. Synapses. Mediators. Physiology of muscles. Blood and lymph. Cardiovascular system. Respiration and gas exchange. Digestion. Function of the liver. Vitamins and microelements. Metabolism, energy and substances. Body temperature. Physiology of the skin. Function of kidneys. Fluid and acid-base balance. Endocrine systems. Reproductive and endocrine function of sexual glands. Vegetative nervous system. Sensomotor function of nervous system. Cortical system. Physiology of physical work. Characteristics of oral cavity's vascularity and teeth's mineralization. Physiological role of saliva. Characteristics of sensible functions in the facial maxillary area. Toothache.

Assessment: Practical and theoretical – written and oral, semester 4th.

MICROBIOLOGY: ECTS credits 5,8

Horarium:

Semester: 3	Lectures	30	Weeks	15
	Practicals	15	Weeks	15
Semester: 4	Lectures	30	Weeks	15
	Practicals	30	Weeks	15

Objectives: Studying the morphology, structure and physiology of microbes. Agents of infectious diseases and principles of microbiological diagnostics. Principles and means for the treatment of infectious diseases. Chemotherapy. Biospecimens. Infectious process and immunity. The meaning of normal microflora. Ethiological role of oral microflora.

Contents: General microbiology, infection and immunity, special microbiology.

Assessment: Practical examination and theoretical – written and oral, semester 4th.

SOCIAL MEDICINE AND MEDICAL ETHICS: ECTS credits 3,4**Horarium:**

Semester: 4	Lectures	15	Weeks	15
	Practicals	30	Weeks	15

Objectives: To educate students, studying dental medicine, an integral social medical approach and attitude to the patient and to the problems of the public health care.

Contents: Applying social approach in respect to health and attitude to the patient as well. Epidemiological methods applied in public dental medicine health study. Public health evaluation. Approaches and indicators used in dental medicine health studies. Moral and legal aspects of dental medicine practice. Health promotion. Emergency medical services.

Assessment: Written and oral examination in the 4th semester.

MEDICAL PSYCHOLOGY: ECTS credits 2,8**Horarium:**

Semester: 4	Lectures	15	Weeks	15
	Practicals	15	Weeks	15

Objectives:

Contents:

Assessment: Written and oral examination in the 4th semester.

DISASTER MEDICINE: ECTS credits: 2,8**Horarium:**

Semester: 4	Lectures	15	Weeks	15
	Practicals	15	Weeks	15

Objectives: Theoretical and practical training for work under urgent conditions.

Contents: General characteristics of the disasters. Diagnostics and treatment of traumatic and radiation injuries. Intoxication with toxic substances. Frequent epidemic diseases in catastrophes. Organization, planning and management of health care in critical situations.

Assessment: Written and oral examination in the 4th semester.

PHARMACOLOGY: ECTS credits 3,8**Horarium:**

Semester 4	Lectures	30	Weeks	15
	Practicals	30	Weeks	15
Semester 5	Lectures	15	Weeks	15
	Practicals	30	Weeks	15

Objectives: Studying the pharmacological and toxicological effects of drugs, applied in dental medicine.

Contents: Main principles of general pharmacology. Drugs' effects on cholinergic and adrenergic mediators, applied in dental medicine. Drugs' effects on central nervous system; Drugs' effects on cardiovascular, respiratory and digestive systems. Local and general anesthetics applied in dental medicine. Pharmacology and toxicology of chemotherapeutics, applied in dental medicine. Principles of drug interactions in dental medicine.

Assessment: Practical and theoretical – written and oral in the 5th semester.

PATHOLOGICAL PHYSIOLOGY: ECTS credits 4,3

Horarium:

Semester: 5	Lectures	45	Hours per week	3	Weeks	15
	Practicals	30	Hours per week	2	Weeks	15

Objectives: Studying the etiology and pathogenesis of diseases.

Contents: General ethiology and pathogenesis. Pathological processes (inflammation, fever, metabolic disorders and hypoxia). General clinical syndromes of vital systems under structural-dynamic violations.

Assessment: Practical and theoretical – written and oral in the 5th semester.

HYGIENE AND EPIDEMIOLOGY: ECTS credits 3,4

Horarium:

Semester: 5	Lectures	30	Weeks	15
	Practicals	30	Weeks	15

Objectives: To develop professional knowledge and abilities for a prophylactic approach, professional behavior for carrying out the sanitary anti-epidemic activity.

Contents: The program is developed in accordance with the requirements of the general practitioner's qualification references. It is considered also with the normative documents for dental medicine prophylactics, children's education for oral hygiene, environment preservation, and hospital hygiene. The envisaged topics are in greatest extent in conformity with the dental medicine direction of training.

Assessment: Written and oral examination in the 5th semester.

PATHOLOGICAL ANATOMY: ECTS credits 3,4

Horarium:

Semester: 6	Lectures	30	Weeks	15
	Practicals	30	Weeks	15
Semester: 7	Lectures	30	Weeks	15
	Practicals	30	Weeks	15

Objectives: Teaching the structural lesions in diseases.

Contents: General pathology - morphologic manifestations of disturbances in metabolism. Blood circulation. Structural processes in inflammation. Compensatory and repair processes. Tumors. Clinical pathology - diseases of the oral cavity and the digestive system. Morphologic alterations in organs. Infectious diseases.

Assessment: Practical and theoretical – written and oral in the 7th semester.

SURGERY incl. ANAESTHESIOLOGY AND EMERGENCY CONDITIONS:

ECTS credits 4.3

Horarium:

Semester: 6	Lectures	30	Weeks	15
	Practicals	45	Weeks	15

Contents: Antiseptics and aseptics. Principles of anaesthesiology and resuscitation. Congenital diseases in the maxillofacial area. Traumatic diseases. Urgent diseases in surgery. Haemorrhage and blood transfusion. Occupational diseases in stomatology - panaritium, tendovaginitis.

Assessment: Practical and theoretical - oral and written in the 6th semester.

OTO-RHINO-LARYNGOLOGY: ECTS credits 1,6**Horarium:**

Semester: 7	Lectures	15	Weeks	15
	Practicals	15	Weeks	15

Objectives: The course gives basic knowledge and practical skills necessary for the practicing stomatologist.

Contents: Ear, nose and throat anatomy and physiology. Etiology, symptomatology, examination and treatment of oto-rhino-laryngological diseases.

Assessment: Written and oral in the 7th Semester.

INTERNAL DISEASES: ECTS credits 3,4**Horarium:**

Semesters: 7	Lectures	30	Weeks	15
	Practicals	15	Weeks	15
Semesters: 8	Lectures	30	Weeks	15
	Practicals	15	Weeks	15

Objectives: The students are acquainted with socially important internal diseases.

Contents: The programme emphasizes on the relationship between the internal diseases and the pathology of the oral cavity and dentition.

Assessment: During the semester –tests, Final examination – practical and theoretical- written and oral in the 8th semester.

PEDIATRIC AND INFECTIOUS DISEASES: ECTS credits 3,4**Horarium:**

Semester: 8	Lectures	30	Weeks	15
	Practicals	30	Weeks	15

Objectives: Acquainting the student with the infectious diseases.

Contents: Infection, infectious process and infectious diseases. AIDS. The course focuses on the wide dissemination of infectious diseases of great social importance.

Assessment: Written and oral in the 8th Semester.

FORENSIC MEDICINE: ECTS credits 1,6

Horarium:	Lectures	15	Weeks	15
	Practicals	15	Weeks	15

Semester: 8

Objectives: Training of students in dental medicine of the basics of forensic medicine for the general practice in cases of legal dental medicine problems, identification and increase of their law-consciousness.

Contents: Correct evaluation of the physical injuries in maxillofacial area. Participation of dental medicine doctors in the identification of persons and dead bodies with unknown identity. Legal deontological problems in the dental medicine practice: relations between colleagues, dental medicine-nurse and dental medicine - patient. Criminal civil and administrative responsibilities of the dental medicine in his professional activity, according to the legislation of republic of Bulgaria. **Assessment:** Written and oral examination, 8th Semester.

OBSTETRICS AND GYNECOLOGY: ECTS credits 1,6**Horarium:**

Semester: 8	Lectures	15	Weeks	15
	Practicals	15	Weeks	15

Objectives: The students acquire the necessary knowledge for the treatment of pregnant women and maternity patients.

Contents: Normal pregnancy. Development of the fertilized egg. Role of the placenta. Diagnosis of early and advanced pregnancy. Normal delivery. Morphologic and functional changes in the pregnant woman. Pregnancy - gingivitis, stomatitis, caries. Early pregnancy and dental medicine. Normal and pathologic puerperal period. Puerperal infections. Delivery anesthesia. Effect of some drugs on the pregnant woman and the fetus. Premature interrupting of pregnancy. Premature birth. Fetus in jeopardy. Modern methods for diagnosis of the threatened fetus. Neonatal asphyxia and resuscitation. Contraception. The role of the doctor in dental medicine in female consultation.

Assessment: Written and oral in the 8th Semester.

DERMATOLOGY AND VENEROLOGY: ECTS credits 3,8**Horarium:**

Semester: 9	Lectures	15	Weeks	15
	Practicals	30	Weeks	15

Objectives: Studying the skin, oral mucous and skin appendages diseases.

Contents: Structure of the skin. Infectious bullose dermatoses. Vascular dermatosis. Allergic dermatoses. Oral mucous diseases. Tumors of the skin and visible mucous. Sexually transmitted diseases.

Assessment: Practical and theoretical –written and oral, 9th Semester.

NEUROLOGY AND PSYCHIATRY: ECTS credits 2,8

Horarium:	Lectures	15	Weeks	15
	Practicals	15	Weeks	15

Semester: 9**Objectives:** Acquiring the necessary knowledge on nervous diseases and psychiatry.**Contents:** Clinical knowledge of the main symptoms, syndromes and diseases in neurology and psychiatry with respect to the attitude of the specialist under specific conditions. Neurological pathology in regions of the face. Oral cavity and teeth neuralgia and neuritis of trigeminal and glossopharyngeal nerves, atypical neuralgia in these regions. Neurological complications in mixed trauma of the face, the teeth and the head and therapeutic obligations of the dental medicine doctor.**Assessment:** Written and oral examination in the 9th Semester.

OPHTHALMOLOGY: ECTS credits 2,8

Horarium:	Lectures	15	Weeks	15
	Practicals	15	Weeks	15

Semester: 9**Contents:** Anatomy and physiology of the visual analyzer and its relation to the anatomy of the dental structures. Methods of examination in ophthalmology, facilitating the doctor in the differential diagnosis. Diseases of the orbit, anterior and posterior eye segment in the dental practice.**Assessment:** Written and oral examination in the 9th semester.

DENTAL MATERIALS: ECTS credits 4

Horarium:	Lectures	30	Weeks	30
	Practicals	30	Weeks	30

Semester: 1,2**Objectives:****Assessment:** Written and oral examination in the 2nd Semester.

PRE-CLINICS OF PROSTHETIC DENTAL MEDICINE: ECTS credits Year 1 - 7,2; Year 2 – 9,4;**Horarium:**

Semester 1	Lectures	15	Weeks	15
	Practicals	30	Weeks	15
Semester 2	Lectures	15	Weeks	15
	Practicals	60	Weeks	15
Semester 3	Lectures	30	Weeks	15
	Practicals	90	Weeks	15
Semester 4	Lectures	15	Weeks	15
	Practicals	60	Weeks	15

Objectives: Gaining theoretical knowledge and practical skills for the treatment of crown teeth and dental arch defects.**Contents:** Dental materials. Pre-clinical and Clinical prosthetic dental medicine.**Assessment:** Written and oral examination, test, in the 4th semester.

CLINICS OF PROSTHETIC DENTAL MEDICINE: ECTS credits Year 3 - 5,2; Year 4 - 6,2; Year 5 - 7,4.

Horarium:

Semester 5	Lectures	15	Weeks	15
	Practicals	30	Weeks	15
Semester 6	Lectures	15	Weeks	15
	Practicals	60	Weeks	15
Semester 7	Lectures	15	Weeks	15
	Practicals	60	Weeks	15
Semester 8	Lectures	15	Weeks	15
	Practicals	60	Weeks	15
Semester 9	Lectures	30	Weeks	15
	Practicals	60	Weeks	15
Semester 10	Lectures	15	Weeks	15
	Practicals	30	Weeks	15

Objectives: Gaining theoretical knowledge and practical skills for the treatment of crown teeth and dental arch defects.

Contents: Dental materials. Pre-clinical and Clinical prosthetic dental medicine.

Assessment: Written and oral examination, test, in the 10th semester.

PRE-CLINICS AND CLINICS OF CONSERVATIVE DENTAL MEDICINE: ECTS credits Year 2 – 1.6; Year 3 – 7,6; Year 4 - 8; Year 5 - 9.2; Year 6 - 11.0

Horarium:

Semester 4	Lectures	15	Weeks	15
	Practicals	15	Weeks	15
Semester 5	Lectures	30	Weeks	15
	Practicals	60	Weeks	15
Semester 6	Lectures	15	Weeks	15
	Practicals	60	Weeks	15
Semester 7	Lectures	15	Weeks	15
	Practicals	90	Weeks	15
Semester 8	Lectures	15	Weeks	15
	Practicals	75	Weeks	15
Semesters 9	Lectures	15	Weeks	15
	Practicals	75	Weeks	15
Semesters 10	Lectures	15	Weeks	15
	Practicals	75	Weeks	15

Objectives: Diagnostics and treatment of the hard dental tissues, tooth pulp and periodontium.

Contents:

A. Preclinic of conservative dentistry - cavity preparation of dental amalgam, composite materials and inlays; filling materials - qualities and application; endodontics - anatomy of pulpal camera, endodontic cavity preparation, treatment of root canals; fillig canals: means and methods.

B. Clinical conservative dentistry - clinic, diagnostics and treatment of hard dental tissues diseases, treatment of tooth pulp and periodontium diseases.

Assessment: Practical and theoretical –written and oral examination, semesters 6th and 10th.

PHYSIOTHERAPY (general and special): ECTS credits 2,8

Horarium:	Lectures	15	Weeks	15
	Practicals	15	Weeks	15

Semester: 9

Contents:

Assessment: Written and oral examination in the 9th semester.

PRE-CLINICS AND CLINICS OF ORAL AND MAXILLOFACIAL SURGERY: ECTS credits Year 3 – 8,5, Year 4 – 6,2 Year 5 – 9,2, Year 6 – 14,1

Horarium:

Semester 5	Lectures	30	Weeks	15
	Practicals	60	Weeks	15
Semester 6	Lectures	30	Weeks	15
	Practicals	60	Weeks	15
Semester 7	Lectures	15	Weeks	15
	Practicals	60	Weeks	15
Semester 8	Lectures	15	Weeks	15
	Practicals	60	Weeks	15
Semester 9	Lectures	15	Weeks	15
	Practicals	75	Weeks	15
Semester 10	Lectures	15	Weeks	15
	Practicals	75	Weeks	15

Objectives: Learning the surgical methods for the treatment of surgical diseases in dental medicine.

Contents: Topographic anatomy and anesthesia in dental medicine surgery. Extraction of teeth. Periodontitis and jaw's cyst, abscesses and phlegmons in the facial-maxillary area. Osteomyelitis in the facial-maxillary area. Odontogenic sinusitis. Lymph nodes' diseases and specific inflammatory processes in the maxillary area. Diseases of salivary glands. Diseases of temporomandibular articulation and facial nerves. Trauma in the facial-maxillary area. Tumors of the oral cavity and the facial-maxillary area. Congenital and acquired defects of the labia and the palate. Dental, jaw and facial deformations.

Assessment: Practical and theoretical –written and oral examination; semesters 6th and 10th.

PRECLINICS OF PEDIATRIC DENTAL MEDICINE: ECTS credits

Year 2 – 1,6; Year 3 – 1,6,

Horarium:

Semesters: 4	Lectures	15	Weeks	15
	Practicals	15	Weeks	15
Semesters: 5	Lectures	15	Weeks	15
	Practicals	15	Weeks	15

Contents: Embryonic development, histogenesis, morphology and physiology of the tooth structures, gingiva and parodont. Definition of the permanent and deciduous tooth. Root resorbtion_ Oral ecosystem - microflora and oral liquids (saliva, content of gingival sulcus).

Assessment: Practical and theoretical – written and oral, semester 5th.

CLINICS OF PEDIATRIC DENTAL MEDICINE: ECTS credits Year 3 – 2,1; Year 4 – 3,8; Year 5 – 6,8; Year 6 – 8,0

Horarium:

Semester 6	Lectures	15	Weeks	15
	Practicals	30	Weeks	15
Semester 7, 8	Lectures	30	Weeks	30
	Practicals	60	Weeks	30
Semester 9	Lectures	15	Weeks	15
	Practicals	30	Weeks	15
Semester 10	Lectures	15	Weeks	15
	Practicals	60	Weeks	15

Semesters: 6,7, 8,9 and 10

Objectives: To acquaint the students with the pathology of the oral cavity in childhood. To build up abilities for correct diagnosis of the most common diseases of the teeth, gingiva and parodont and practical skills for their treatment. The students acquire practical skills on phantom models and only after that they work with up to 16 years old patients within the framework of three semesters. There is another semester of prophylactics to present the principal tendencies of dental prevention.

Assessment: Practical and theoretical examination – written and oral, semester 10th.

DENTAL HYGENE and PREVENTION: ECTS credits Year 3 – 1,6; Year 4 – 2,8

Horarium:

Semester: 6	Lectures	15	Weeks	15
	Practicals	15	Weeks	15
Semester: 7	Lectures	15	Weeks	15
	Practicals	15	Weeks	15

Assessment: Practical and theoretical –written and oral examination in the 7th semester.

DENTAL PUBLIC HEALTH (DPH): ECTS credits 5,2

Horarium:

Semester: 5	Lectures	30	Weeks	15
	Practicals	30	Weeks	15
Semester: 6	Lectures	15	Weeks	15
	Practicals	30	Weeks	15

Objectives: Creating basic knowledge about the essence, structure, governance, financing and legal regulation of dental health services and skills for organization and management of dental practice.

Contents: DPH course gives an opportunity for gaining theoretical knowledge and competence about:

Structure and organization of national healthcare system

Assessment: Written and oral examination in the 6th Semester.

ORAL PATHOLOGY: ECTS credits 1.6

Horarium:

Semester: 6	Lectures	15	Weeks	15
	Practicals	15	Weeks	15

Objectives: Familiarization of future dental medicine doctor with damages of oral mucosa, periodontium and the teeth, associated with occupational risk factors. Prevention of occupational diseases and accidents at the work place.

Contents: Characteristics of the most common occupational diseases - intoxication with heavy metals; poisoning due to organic solvents; gas poisoning; damages due to noise and vibrations, dusts and allergens, etc.

Assessment: Written and oral, Semester 6th.

DIAGNOSTICS IMAGING (general and special): ECTS credits Year 3 – 2,8; Year 4 – 2,8

Horarium:

Semester: 6	Lectures	30	Weeks	15
	Practicals	30	Weeks	15
Semester: 7	Lectures	15	Weeks	15
	Practicals	30	Weeks	15

Objectives: Studying the methods and techniques for X-ray examination and ITS application in practice.

Contents: Radiographs, methods and techniques of respiratory, cardiovascular, urogenital, digestive, and nervous system X-ray examination. Methods and techniques for examination of maxillofacial area, trauma, teeth diseases, parodont, periodontium. Traumatic, inflammatory and tumor diseases of temporomandibular articulations.

Assessment: Practical and theoretical –written and oral examination in the 7th semester.

DENTAL ALLERGOLOGY: ECTS credits 2,2

Horarium:	Lectures	15	Weeks	15
	Practicals	15	Weeks	15

Semester: 7

Objectives: Mastering of theoretical and practical knowledge for applying complex focal diagnostics and clinical dental allergology in diagnosing clinically healthy and medical compromised patents for demonstrating the connection between oral and all-medical diseases in conformity with current European standards.

Contents: The “Dental clinical allergology” course gives an opportunity to acquire practical and theoretical knowledge and competency on special dental clinical allergology and complex focal diagnostics.

Assessment: Written and oral examinations in the 7th semester.

ORTHODONTICS: ECTS credits Year 4 – 6,2, Year 5 – 6,8 Year 6 – 8,0**Horarium:**

Semester 7	Lectures	30	Weeks	15
	Practicals	30	Weeks	15
Semester 8	Lectures	15	Weeks	15
	Practicals	30	Weeks	15
Semester 9	Lectures	15	Weeks	15
	Practicals	45	Weeks	15
Semester 10	Lectures	15	Weeks	15
	Practicals	60	Weeks	15

Semesters: 7, 8, 9 and 10

Objectives: Prevention and treatment of dental maxillary deformations and anomalies.

Contents: Development of dental-maxillary system and facial skeleton. Etiology of dental maxillary deformations and anomalies. Methods for diagnostics. Prophylactics and treatment of dental-maxillary deformations and anomalies.

Assessment: Practical and theoretical – written and oral, in semesters 10th.

PARODONTOLOGY:

ECTS credits: Year 4 - 3.2, Year 5 - 7.4, Year 6 - 4.8

Horarium:

Semesters 7	Lectures	15	Weeks	15
	Practicals	15	Weeks	15
Semesters 8	Lectures	15	Weeks	15
	Practicals	30	Weeks	15
Semesters 9	Lectures	15	Weeks	15
	Practicals	45	Weeks	15
Semester 10	Lectures	30	Weeks	15
	Practicals	45	Weeks	15

Semesters: 7, 8, 9 and 10

Contents: Instruments and instrumentation. Structural biology of periodontium and oral mucosa. Etiology and pathogenesis of periodontium and oral mucous diseases. Diagnostics of periodontium and oral mucous diseases. Treatment of periodontium and oral mucous diseases. Prophylactics of periodontium and oral mucous diseases.

Assessment: Practical and theoretical – written and oral in the 10th semester.

FACULTY OF PHARMACY



*Address: 2, Dunav Str.
Sofia 1000, Bulgaria*

<http://www.pharmfac.acad.bg>

Dean: Prof. Nicolai Danchev, MD, PhD

Tel./ Fax (+359 2) 9879-874

E mail: DEAN@pharmfac.acad.bg

Faculty Coordinator: Prof. Valentina Petkova, PhD, DSc

Tel.(+359 2) 9236 593; Fax(+359 2) 9879-874

E mail: vpetkova@pharmfac.acad.bg

The Faculty of Pharmacy has been part of the Medical University of Sofia since 1995 and offers higher education in pharmacy. The Faculty of Pharmacy in Sofia celebrated its 50th Anniversary in 2001. It has six departments three of which teach pharmacy-oriented fundamental subjects (inorganic, analytical and organic chemistry, physical chemistry, botany and mathematics). Another five departments offer the specific pharmaceutical subjects: Pharmaceutical technology and Biopharmacy, Pharmacognosy (Phytochemistry), Pharmaceutical Chemistry and Pharmaceutical Analysis, Pharmacology and Toxicology, Social Pharmacy, The medical subjects are taught by the corresponding departments at the Faculty of Medicine, Medical University of Sofia

The instruction course is organized in three levels and lasts five years. The first level is aimed at securing fundamental training of future pharmacists. The second level is oriented towards gaining knowledge and acquiring skills specific for the pharmaceutical profession. The education is organized in two profiles - general and industrial, the choice being made after the sixth semester. Students of both majors study special pharmaceutical and medical subjects. The third level of the study course -practicum- takes place in the X-th semester in public or hospital pharmacies,

pharmaceutical companies, and laboratories for drug control which are established as training centers. The assessment of this practical work includes written report and oral colloquia. For their graduation students in pharmacy are obliged to pass a state final certification examination or to prepare and defend a diploma thesis. The graduates of both profiles are conferred a "Master" degree and the qualification of "Pharmacist".

The first year of the programme covers the subjects Mathematics; Biology; Physics and Biophysics; Latin language; Foreign Language; History of Pharmacy; Applied Mathematics; Anatomy and Physiology; Inorganic Chemistry.

The second year is dedicated to continuation of Anatomy and Physiology; the other subjects are Computer Techniques; Analytical Chemistry; Organic Chemistry; Microbiology; Pharmaceutical Botany; Physical Chemistry.

In the third year the curriculum includes Pharmaceutical Botany; Physical Chemistry; Pharmaceutical Chemistry; Pharmaceutical Technology and Biopharmacy, Part 1; Biochemistry; Clinical Chemistry; Hygiene and Ecology; Medical Techniques and Instruments; Pharmacognosy, Part 1; Pharmacology.

In the fourth year the studied subjects are Pharmaceutical Technology and Biopharmacy, Part 2; Pharmaceutical Analysis; Pharmacology; Social Pharmacy; Pharmacognosy; Pathonatomy and Pathophysiology; Toxicology; Pharmacognosy, Part 2; Medical Genetics; Clinical Medicine and Pharmacotherapy.

The ninth semester covers the subjects Basics of Clinical Medicine; Pharmaceutical Technology and Biopharmacy, Part 3; Bromatology; Modern Requirements to the Production of Drugs.

The Faculty also offers instruction to extramural students and postgraduate education in five subjects: Pharmaceutical Technology and Biopharmacy; Drug Analysis; Medicinal Plants and Herbals; Clinical Pharmacy; Organization and Economics of the Pharmaceutical Network and Pharmaceutical Industry.

Location.

The Faculty building is located in the centre of the city of Sofia, 50 m away from the temple "St. Alexander Nevski" and 150 m behind the building of the National Assembly, near to the monument of Vassil Levski.

DISCIPLINES

MATHEMATICS: ECTS credits 5,0

Prerequisites: Successful completion of secondary education.

Horarium:	Lectures	30	Weeks	15
	Practicals	30	Weeks	15

Semester: 1

Contents: Elements of linear algebra and analytical geometry, elements of the theory of numerical series and numerical functions of one or two variables, elements of differential and integral calculus, elements of the theory of ordinary differential equations.

Objectives: Gaining of knowledge of the basic fields of higher mathematics necessary for the understanding of the quantitative methods and models in physical chemistry, biochemistry and pharmacology, and of capability of unaided solution of some of the often encountered problems in pharmaceutical research.

Assessment: Examination in two stages - practical and theoretical parts.

HISTORY OF PHARMACY: ECTS credits 3,0

Prerequisites: None.

Horarium: Lectures 30 Weeks 15
Semester: 1

Contents: Development of the pharmaceutical knowledge and practice related to the development of society and cultural history of nations. The development of Bulgarian pharmacy is considered in the context of world pharmacy.

Objectives: To provoke respect to the pharmaceutical profession by acquainting the students with the contribution of various countries to the development of world pharmacy, as well as to elucidate the activities of famous old schools.

Assessment: Passing (on the “yes” or “no” basis) in written.

MOLECULAR BIOLOGY: ECTS credits 5,0

Prerequisites: Successfully passed entry exams on biology and chemistry.

Horarium: Lectures 30 Weeks 15
Practicals 30 Weeks 15
Semester: 2

Contents: Material basis of life. Organization of the living systems. Heredity and variety. The organism as a unified system. Immunological homeostasis. Sexual reproduction and individual development. Biological evolution and population genetics. Anthropogenesis. Ecology. Poisonous plants and animals with medical significance.

Objectives: Obtaining knowledge on the basic principles of organization and function of the living systems. Cellular and molecular bases of life. The human as a product of the biological and social evolution. Ecology and the role of humans in the biosphere.

Assessment: Continuous assessment during the practicals, colloquium and theoretical examination at the end of the semester, including work in written.

GENERAL AND INORGANIC CHEMISTRY: ECTS credits 10,0

Prerequisites: Successfully passed competitive examination on chemistry.

Horarium:
Semester 1 Lectures 30 Weeks 15
Practicals 45 Weeks 15
Semester 2 Lectures 15 Weeks 15
Practicals 30 Weeks 15

Contents: The most important problems of the general theory as well as the systematic material of inorganic chemistry are included in the lecturing course. Particular attention is given to the macro- and microbiogenic elements and their substances which are of decisive importance for the existence and functioning of bio-systems. The laboratory exercises are preceded by a course of stoichiometric calculations. The practical training includes the solution of theoretical problems.

Objectives: Training in the basic manipulations in a chemical laboratory. Creation of a basis for the future education in all other chemical subjects.

Assessment: Practical examination, examination in written, oral examination.

PHYSICS AND BIOPHYSICS: ECTS credits 7,0

Prerequisites: Successfully passed examination on Higher Mathematics is recommended.

Horarium:

Semester 1	Lectures	30	Weeks	15
	Practicals	15	Weeks	15
Semester 2	Lectures	30	Weeks	15
	Practicals	15	Weeks	15

Contents: Structure and properties of liquids and solids. Optics - basics of refractometry, dioptrometry, photolorimetry, spectrophotometry, nephelometry, polarimetry, microscopy. Spectroscopy - atomic, molecular, X-ray, mass, NMR, EPR, Moessbauer. Ionization radiations - X-rays, radioactivity, dosimetry. Rheology of simple liquids and heterogeneous systems, haemorheology. Thermodynamics and Biothermodynamics. Biological and man-made membranes - functions, types, chemical composition, structure. Free-radical lipid peroxidation in biomembranes. Transport of substances through porous and semipermeable membranes, facilitated diffusion, active transport. Electrical properties of cells and tissues - biopotentials: static and dynamic, surface electrical charge, electrical conductivity.

Objectives: Knowledge necessary for the study of Analytical Chemistry, Physical Chemistry, Organic Chemistry, Pharmaceutical Chemistry, Technology of Medicinal Substances, Processes and Apparatuses, Chemical-Pharmaceutical Technology. Skills acquired by laboratory training.

Assessment: Examination in written with oral explanations.

LATIN: ECTS credits 5,0

Prerequisites: None.

Horarium:	Seminars	60	Weeks	30
Semesters:	1 and 2			

Contents: Notion of the Latin verb and some verbal forms in pharmaceutical terminology. Nouns, adjectives and numerals and their use in the specialized pharmaceutical language. Word-building: prefixes, suffixes. Term elements of Latin and Greek origin by means of which the complex medical and pharmaceutical terms have been created and are created at present. General rules in chemical nomenclature and in the formation of the denomination of drugs. Basics of the botanical nomenclature. Basic terms in pharmacognosy. Prescription - principles in making out a prescription, specific formulae in Latin and generally accepted abbreviations.

Objectives: Formation of a stable terminological basis in the beginning of the education in pharmacy which would facilitate the gaining of knowledge on the other objects foreseen in the teaching program.

Assessment: Current control - oral and written, semester works in written.

BULGARIAN, First academic year (for foreign students only): ECTS credits 4,0

Prerequisites: Training in a basic course of Bulgarian language and successfully passed examinations - oral and written.

Horarium:	Seminars	120	Weeks	30
Semesters:	1 and 2			

Contents: Texts from human anatomy and physiology, and biology, taught during the first academic year. Scientific-popular texts. Exercises on: basic phonetic rules in contemporary Bulgarian language. Lexicology - medical and pharmaceutical terminology. Functional-semantic structures building up the medical texts. Syntactic of the simple sentence.

Texts from human physiology, microbiology and botany, taught during the second academic year. Exercises on: syntax of the complex sentence. Structure of a scientific text. Functional semantic constructions typical of the Bulgarian medical text. Lexicology - medical and pharmaceutical terminology. Stylistics - text edition.

Objectives: Knowledge of the language necessary for the oral and written adequate communication in Bulgarian lingual medium - both in everyday life and in its academic aspects.

Assessment: Current control, semester tests. Examination.

SPORTS: ECTS credits 5,0

Prerequisites:

Horarium:

Semester 1	Lectures	0	Weeks	15
	Practicals	30	Weeks	15
Semester 2	Lectures	0	Weeks	15
	Practicals	30	Weeks	15

Contents: To help students and their teachers to balance weekly the mental load and the emotions, related to sport activities. There are three forms of sport activity: standard term classes; competitive classes; additional courses on water and winter sports after the terms.

Term classes: aerobics, badminton, basketball, bodybuilding, volleyball, calanetics, swimming, skiing, tennis, table tennis, and football. Yearly the Department organizes sea and mountain courses during the holidays. The students can practice yachting, sculling, surfing, and swimming. The students can acquire skiing skills (at two different levels) and practice tourism.

Objectives:

Assessment:

STATISTICAL METHODS IN PHARMACY: ECTS credits 4,0

Prerequisites: Successfully passed examination in Mathematics.

Horarium:

Lectures	15	Weeks	15
Practicals	30	Weeks	15

Semester: 2

Contents: Elements of combinatorics and classical probability theory - random experiments and events. Statistical, classical and geometrical probability. Basic formulae for the probability of a random event. Sequences of independent experiments. Random quantities and their numerical characteristics. Theorem of Chebishev, Bernouli's law for big numbers and theorem of Liapunov. Elements of the mathematical statistics. Elements of the mathematical modeling.

Objectives: Knowledge of the basic sections of the probability theory, mathematical statistics and mathematical modeling that are necessary for the understanding of the quantitative methods and models of Physical Chemistry, Biochemistry, Biology, Medicine, Pharmacology and for the unaided solution of some of the problems often encountered in pharmaceutical research.

Assessment: Passing (on the "yes" or "no" basis) in two stages - practical and theoretical.

HUMAN PHYSIOLOGY: ECTS credits 7,0**Prerequisites:** None**Horarium:**

Semester 2	Lectures	30	Weeks	15
	Practicals	0	Weeks	15
Semester 3	Lectures	30	Weeks	15
	Practicals	30	Weeks	15

Contents: Structure and function of cells, organs and systems building up the human organism. Mechanism, regulation and adaptation of physiological functions. Physiological methods for the investigation with applications in clinical and experimental practice.

Objectives: Understanding of the mechanism of action of medicinal substances.

Assessment: Oral and written examination at the end of the third semester.

PATHOANATOMY: ECTS credits 3,0**Prerequisites:** Successfully passed examinations on Anatomy and Physiology.

Horarium:	Lectures	15	Weeks	15
	Seminars	15	Weeks	15

Semester: 3

Contents: Processes of general pathoanatomy: necrosis and atrophy. Disorders in the metabolism of tissues and cells.. Disorders in the development of the organism (teratology). Drug injuries (drug disease), etc.

Objectives: Basic theoretical knowledge in the field of medicine in order to facilitate the understanding of other taught subjects.

Assessment: Passing (on the “yes” or “no” basis).

INFORMATION TECHNOLOGIES: ECTS credits 3,0**Prerequisites:** None

Horarium:	Practicals	30	Weeks	15
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Semester: 3

Contents: Lay-out and principle of action of contemporary personal computers and related operation systems. Contemporary text-processing, graphical, tabular, editing and communicative possibilities of computer systems. Practical usage of the basic Internet and e-mail services.

Objectives: Gaining of knowledge on the lay-out and principle of action of contemporary personal computers and related operation systems. Development of capabilities for the practical usage of contemporary computer systems and information technologies.

Assessment: Passing (on the “yes” or “no” basis) in two stages - practical and theoretical.

PATHOPHYSIOLOGY: ECTS 5,0**Prerequisites:** Successfully passed examinations on Anatomy and Physiology.

Horarium:	Lectures	30	Weeks	15
	Seminars	30	Weeks	15

Semester: 4

Contents: Processes of general pathology: disorders in circulation, forms of inflammation, regenerative growth, disorders in the development of the organism (teratology). Drug injuries (drug disease), etc.

Objectives: Basic theoretical knowledge in the field of medicine in order to facilitate the understanding of other taught subjects.

ANALYTICAL CHEMISTRY: ECTS credits 15,0

Prerequisites: Successfully passed examination on Inorganic Chemistry.

Horarium:

Semester 3	Lectures	30	Weeks	15
	Practicals	60	Weeks	15
Semester 4	Lectures	30	Weeks	15
	Practicals	60	Weeks	15

Contents: Qualitative analysis of cations and anions. Basic parts in the quantitative titrimetric analysis: acid-base equilibria, slightly soluble substances, complexometric equilibria, redox equilibria. Instrumental methods of analysis - potentiometry, spectrophotometry, chromatography (thin-layer chromatography and high-efficiency liquid chromatography).

Objectives: Gaining knowledge on the basic principles and methods of chemical analysis

Assessment: Written and oral examination.

ORGANIC CHEMISTRY: ECTS credits 15,0

Prerequisites: Successfully passed examinations on Physics, Mathematics, as well as General and Inorganic Chemistry.

Horarium:

Semester 3	Lectures	30	Weeks	15
	Practicals	60	Weeks	15
Semester 4	Lectures	30	Weeks	15
	Practicals	60	Weeks	15

Contents: Nomenclature of organic compounds. Structure of substances from the quantum-mechanical point of view. Basics of stereochemistry. Relationship between structure and reactivity. Mechanisms of organic reactions. Spectral methods of analysis (infrared spectroscopy, nuclear magnetic resonance, mass spectroscopy, electron spectroscopy). Fatty and aromatic, saturated and unsaturated hydrocarbons. Halogen derivatives, hydroxyl derivatives, aldehydes and ketones, carboxylic acids and their functional derivatives. Fatty and aromatic amines. Heterocyclic compounds with three- to six-atom cycles and one or two heteroatoms - oxygen, nitrogen and sulfur. Purines and pteridines. Organic compounds with biological activity. Medicinal substances.

Objectives: Fundamental knowledge of organic chemistry necessary for the training in pharmaceutical chemistry, pharmacognosy, biochemistry, technology of drug forms, chemical-pharmaceutical technology and other specialized subjects.

Assessment: Written examination on three themes and a problem on multistage synthesis in the frames of four hours; each theme and the problem have a relative assessment value of 25%.

MICROBIOLOGY WITH VIROLOGY: ECTS credits 10,0**Prerequisites:** None.**Horarium:**

Semester 3	Lectures	30	Weeks	15
	Practicals	30	Weeks	15
Semester 4	Lectures	30	Weeks	15
	Practicals	30	Weeks	15

Contents: General microbiology, infection and immunity, special microbiology.**Objectives:** Knowledge of the morphology, structure and physiology of microorganisms causing contagious diseases. Principles and means of the treatment of contagious diseases using chemotherapy and biopreparations. Contagious process and immunity of the organism. Causes of various infections and principles of microbiological diagnostics as well as the significance of the normal human microflora. Knowledge of the significance and application of microbiology for the specialty "Pharmacy". Modern biotechnologies using microorganisms for the preparation of antibiotics and other contemporary medicines. Methods of microbiological analysis and control of medicines and biopreparations.**Assessment:** Continuous assessment, written tests, colloquium, examination.

PHYSICAL CHEMISTRY WITH COLOID CHEMISTRY: ECTS credits 7,0**Prerequisites:** Successfully passed examinations on Pure Mathematics, Physics, and Inorganic Chemistry.**Horarium:**

Semester 4	Lectures	30	Weeks	15
	Practicals	30	Weeks	15
Semester 5	Lectures	15	Weeks	15
	Practicals	15	Weeks	15

Contents: Chemical principles in the pharmaceutical science are studied. Thermodynamics. Solutions of electrolytes and nonelectrolytes. Solubility and distribution phenomena. Interfacial phenomena. Colloids and rheology. Kinetics – transition - state theory. Catalysis. Enzyme kinetics. Pharmacokinetics. Quantum-mechanical principles in description of the chemical structure. Drug-biomacromolecule interactions.**Objectives:** The physical chemical principles applied to the physical pharmacy, pharmacokinetics and pharmacodynamics.**Assessment:** Written and oral examination.

PHARMACEUTICAL BOTANY: ECTS credits 10,0**Prerequisites:** None.**Horarium:**

Semester 4	Lectures	30	Weeks	15
	Practicals	30	Weeks	15
Semester 5	Lectures	30	Weeks	15
	Practicals	30	Weeks	15

Contents: Anatomy of plants (cytology, histology, organography). Morphology. Physiology of plants, Phytogeography and ecology. Natural resources of medical plants. Methods of their effective use, protection and reproduction are studied together with their importance as sources of biologically active substances.

Objectives: Knowledge of the medical plants from the point of view of botany, in order to serve as a basis for the study of pharmacognosy.

Assessment: Current control, practical and theoretical examination.

BIOCHEMISTRY: ECTS credits 7,0

Prerequisites: Successfully passed examinations on Inorganic Chemistry, Analytical Chemistry and Organic Chemistry.

Horarium:	Lectures	45	Weeks	15
	Practicals	45	Weeks	13

Semester: 5

Contents: Structure and function of proteins and nucleic acids. Application of knowledge on polymers in the clinical practice. Enzymes. Clinical significance of enzymes. Antimetabolites. Bioenergetics. Citric acid cycle. Metabolism of carbohydrates. Metabolism of lipids. Metabolism of amino acids. Metabolism of nucleotides. Enzymopathies, related to metabolism. Integration and interrelations between metabolism of carbohydrates, lipids, amino acids and nucleotides. Metabolism of DNA, RNA and proteins. Carcinogenesis. Regulation of metabolism. Signal transduction. Hormones. Diabetes Mellitus. Biochemistry and functions of liver. Degradation and synthesis of porphyrins. Jaundices. Biochemistry of nutrition. Computer presentations are used at each lecture - Power Point illustrations and animations (molecular graphics) and other interactive programs.

This course is being now developed also for distance learning, appropriate for under- and post-graduates. The Web-based version of the course consists of lectures, interactive tests and simulations of clinical cases. Part of it is in the Internet:

<http://www.medfac.acad.bg/c&b/biochimia/content.html> or <http://biochemistry.dir.bg>, or <http://sites.portal.ngorc.net/biochemistry/egb/content.html>

Objectives: As biochemistry is the study of the molecular basis of life, the goals of the unit are:

(i) to provide theoretical knowledge on the content, structure and functions of the cell components, on the chemical reactions and processes occurring in cells and their regulation, and to explain their significance for organisms in norm and in disease, giving in each category examples about the application of theory in the clinical practice;

(ii) to pass from passive teaching to active regular or distance problem-based learning via application of theory for solving interactive Web-based computer-simulated cases and to provide self-assessment of knowledge via tests. To assure practical instruction and training in basic laboratory biochemical methods and professional teamwork.

Assessment: Oral and written examinations.

MEDICAL DEVICESG : ECTS credits 3,0

Prerequisites: Stereometry studied in the secondary school.

Horarium:	Practicals	30	Weeks	15
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Semester: 6

Contents: Students get familiar with an international technical language as well as with its rules and application, adapted to the needs of students in pharmacy. During the practical exercises, elements of the construction of heat-exchangers used in pharmaceutical industry are drawn and sized. Computerized approaches are also taught.

Objectives: Knowledge of the rules of the Bulgarian State Standard and practical skills in technical drawing.

Assessment: Continuous assessment.

PHARMACEUTICAL CHEMISTRY: ECTS credits 18,0

Prerequisites: Successfully passed examination on Organic Chemistry.

Horarium:

Semester 5	Lectures	45	Weeks	15
	Seminars	30	Weeks	15
	Practicals	30	Weeks	15
Semester 6	Lectures	45	Weeks	15
	Seminars	30	Weeks	15
	Practicals	45	Weeks	15

Semesters: 5 and 6

Contents: Classical and modern medicinal substances are studied on the basis of a combined pharmacotherapeutic and chemical classification. Each part includes characteristics, structure, chemical denomination, properties, methods of preparation, biotransformation, relationship between structure and activity. Possibilities are considered of alteration of properties, toxicity, etc.

Objectives: In-depth knowledge of the items listed above. **Assessment:** Current control and written and oral examination.

PHARMACEUTICAL TECHNOLOGY, Part 1: ECTS credits 17,0

Prerequisites:

Horarium:

Semester 5	Lectures	30	Weeks	15
	Practicals	75	Weeks	15
Semester 6	Lectures	30	Weeks	15
	Practicals	75	Weeks	15

Contents: Conventional drug dosage forms - pulveres, liquida, unguenta, suppositoria, etc., pharmaceutical operations and pharmacopoeal characteristics.

Objectives: Providing the basic knowledge and practical skills in the preparation and characterization of conventional drug dosage forms.

Assessment: Tests, practical exams, written and oral examinations.

CLINICAL CHEMISTRY: ECTS credits 5,0

Prerequisites:

Horarium:	Lectures	15	Weeks	15
	Practicals	45	Weeks	15

Semester: 6

Contents: Theoretical aspects of clinical chemistry. General problems concerning the materials used for investigation. Types of errors in laboratory diagnostics. Reference limits and values. Analytical reliability of the methods. Quality assurance in clinical laboratories. Basic knowledge on the methods used for the study of electrolytes, oligoelements, indices of the alkali-acidic state of blood, carbohydrates, proteins, enzymes, non-protein nitrogen-containing substances, lipids, hormones, drugs and drug monitoring.

Objectives: Skills for work in clinical laboratories as specialists in clinical chemistry.

Assessment: Oral examination.

PHARMACOGNOSY, Part 1: ECTS credits 17

Prerequisites: Successfully passed examinations on Botany and Organic Chemistry.

Horarium:

Semester 6	Lectures	30	Weeks	15
	Practicals	75	Weeks	15
Semester 7	Lectures	30	Weeks	15
	Practicals	75	Weeks	15

Contents: The curative raw materials of animal and vegetal origin are studied using physical, chemical, physicochemical and biological methods.

Objectives: Identification, elucidation of the qualitative and quantitative content of biologically active compounds in drugs.

Assessment: Current control, practical and theoretical examinations.

PHARMACOLOGY: ECTS credits 15,0

Prerequisites: Successfully passed majority of the courses dealing with medical and biological subjects.

Horarium:

Semester 6	Lectures	30	Weeks	15
	Practicals	45	Weeks	15
Semester 7	Lectures	30	Weeks	15
	Practicals	75	Weeks	15

Contents: Sixth semester. Basic concepts of general pharmacology, necessary for the accumulation of fundamental information concerning the medicinal effect. Special pharmacology, in its parts on the central and autonomous neural systems is also started.

Seventh semester. Drugs affecting the cardio-vascular system, the cell-mediated systems, the endocrine system. The course also includes the study of the microbiological, pharmacodynamic, pharmacokinetic and healing aspects of the clinically applied antiinfectious drugs. Principles of chemotherapy for the selective toxicity with respect to bacterial, viral and fungal infectious causes are considered together with the chemotherapy of malignant tumors and chemoblastoses.

Objectives: On the basis of the already acquired knowledge on the essence of the physiological and pathophysiological processes in the organism, to focus on the medicinal effects of the various pharmacological remedies, with good knowledge of their pharmacodynamics, pharmacokinetics, therapeutic indications and undesired reactions.

Assessment: Oral and written examination; practical examination based on tests; colloquia during the exercises; preparation of a thesis during the seminars.

SOCIAL PHARMACY AND PHARMACEUTICAL LEGISLATION: ECTS credits 12,0

Prerequisites: Successfully completed seventh semester; passed examinations on basic pharmaceutical subjects.

Horarium:

Semester 6	Lectures	30	Weeks	15
	Practicals	45	Weeks	15
Semester 7	Lectures	30	Weeks	15
	Practicals	45	Weeks	15

Contents: Possibility of harmonization of the problems of pharmaceutical legislation, management and marketing, and the good pharmaceutical practice in Bulgaria with those of the European countries.

Objectives: To create an overall concept on the stages from the investigation of drugs to their effective application to patients.

Assessment: Practical examination and examination in written.

HYGIENE AND ECOLOGY: ECTS credits 4,0

Prerequisites: Completed education in Organic Chemistry, Inorganic Chemistry, Quantitative Analysis, Anatomy, Physiology, Pathoanatomy, Pathophysiology, Biochemistry and Clinical Chemistry, Clinical Medicine and Pharmacotherapy.

Horarium:	Lectures	30	Weeks	15
	Seminars	15	Weeks	15

Semester: 7

Contents: Basic ecological problems of pollution, protection and control of atmospheric air, waters and soils. Effect on human health. Physiology of nutrition. Biological and chemical safety of foods. Nutritional diseases. Hygienic requirements to the design and exploitation of pharmacies. Safety in the production of medicinal substances. Physical, chemical and biological factors of the working environment and related professional diseases with emphasize on the specific pathology in the cases of pharmacy personnel and workers in the chemical-pharmaceutical industry. Infection and epidemic processes. Antiepidemic measures. Ecological and antiepidemiological regularities of the infections of the respiratory system. Intestinal, transmittive and coating infections.

Objectives: Possibilities of participation in the system for the monitoring of environment, incl. Biomonitoring. Sanitary control in pharmacies. Participation in the development of prophylactic programs, and in antiepidemic activities.

Assessment: Test and theoretical examination (oral and written).

PHARMACEUTICAL TECHNOLOGY, Part 2: ECTS credits 18,0

Prerequisites: Successfully passed examination on Pharmaceutical Technology and Biopharmacy, Part 1.

Horarium:

Semester 7	Lectures	30	Weeks	15
	Practicals	75	Weeks	15
Semester 8	Lectures	30	Weeks	15
	Practicals	90	Weeks	15

Contents: Classical and modern approaches to the development and characterization of drug dosage forms: solid - (granules, capsules, tablets), sterile - (Parenteralia, Ophthalmica) and phytotherapeutica. Modern requirements for effective and safe dosage forms.

Objectives: Basic theoretical and practical knowledge of the formulation, production and control of dosage forms.

Assessment: Tests, practical examination, written and oral examination.

PHARMACEUTICAL ANALYSIS: ECTS credits 18,0

Prerequisites: Successfully passed examinations on Analytical Chemistry.

Horarium:

Semester 7	Lectures	30	Weeks	15
	Practicals	75	Weeks	15
Semester 8	Lectures	30	Weeks	15
	Practicals	90	Weeks	15

Contents: Possibilities of functional analysis and instrumental methods of analysis (spectroscopy in the UV, visible and IR spectral regions, chromatography, etc.) for the identification and assessment of the amount and purity of the medicinal substances are considered.

Objectives: To assure knowledge and skills in the quality control of medicinal substances.

Assessment: Written and oral examinations.

PHARMACOECONOMY: ECTS credits 6,0

Horarium:	Lectures	30	Weeks	15
	Seminars	45	Weeks	15

Semester: 8

Contents: It compares the value of one pharmaceutical drug to another. It is a sub-discipline of health economics. A pharmacoeconomic study evaluates the cost (expressed in monetary terms) and effect (expressed in terms of monetary value, efficacy or enhanced quality of life) of a pharmaceutical product. There are several types of pharmacoeconomic evaluation: costminimization analysis, cost-benefit analysis, cost-effectiveness analysis and cost-utility analysis. Pharmacoeconomic studies serve to guide optimal healthcare resource allocation, in a standardized and scientifically grounded manner.

Objectives: Knowledge of the basic theoretical requirements and practical skills related to the teaching subject.

Assessment: Written and oral examination.

TOXICOLOGY: ECTS credits 7,0

Prerequisites: Basic knowledge in the fields of the medicobiological and pharmaceutical subjects, the respective examinations being successfully passed.

Horarium:	Lectures	30	Weeks	15
	Seminars	8	Weeks	2
	Practicals	52	Weeks	13

Semester: 8

Contents: General toxicology. Basic modern principles of medicinal toxicology, toxicokinetics and toxicodynamics. Mechanisms of toxic action. Undesired effects of drugs. Drug safety - monitoring of the undesired effects of drugs. Genotoxic, mutagenic, cancerogenic, teratogenic, immunotoxic action. Biotransformation - enzyme mechanisms. Cytochrome P450. Factors affecting toxicity (endogenous and exogenic). Toxicological aspects of medicinal interactions. Misuse of drugs, Drug dependence. Toxicomanias.

Special toxicology. Toxicological characterization of basic pharmacological groups. Mechanisms of the medicinal injuries of organs and systems. Injuries by nonmedicinal agents - alcohol and nicotine. Interaction with drugs. Toxic substances from the environment: pesticides, heavy metals, organic solvents, industrial and domestic gases, etc. Effect on the biotransformation processes. Toxicologic characteristics of medical plants and nutritive additives. Acute medicinal intoxications - modern antidotes, detoxicants.

Assessment: Oral and written examination, colloquia during the practicals, preparation of a thesis during the seminars, current control by tests.

MEDICAL GENETICS: ECTS credits 3,0

Horarium:	Lectures	15	Weeks	15
	Seminars	15	Weeks	15

Semester: 8

Contents: The etiology of inherited diseases, chromosome diseases and differential diagnosis with the teratogene effects of drugs and other exogenic factors in the etiology and pathogenesis of innate malformations are considered. Basic classes molecular diseases with emphasize on the pharmacogenetic defects, enzymopathies, defects in the connective tissue and the role of genetic factors in the oncogenesis as well as approaches to genetic prophylaxis and therapy, and principles of gene therapy also includes.

Objectives: Basic knowledge of the problems of inherited pathology.

Assessment: Passing (on the "yes" or "no" basis).

PHARMACOTHERAPY: ECTS credits 12,0

Prerequisites: Successfully passed majority of the courses dealing with medical and biological subjects and the examinations on Pharmacology and Toxicology.

Horarium:

Semester 8	Lectures	30	Weeks	15
	Practicals	45	Weeks	15
Semester 9	Lectures	30	Weeks	15
	Practicals	45	Weeks	15

Contents: The clinics and medical treatment of the following syndromes and diseases are considered: the infectious-inflammatory syndrome with lung localization, incl. bronchial asthma as well as the bronchospastic syndrome. Syndrome of cardiac insufficiency. Thromboembolic syndrome. Dislipidemias. Hypertonia; Syndrome of cardiac inhemia. Cardiac arhythmia. Hyperacidic syndrome. Noninfectious-inflammatory syndrome. Malignant tumors and chemoblastoses. Hyperglycemia and other endocrine disorders. Dermatologic diseases. Cerebral-vascular disease. Undesired reactions caused by prolonged pharmacotherapy.

Objectives: To provide information on the clinics of various syndromes and diseases of internal medicine, on the mechanisms of the pathologic process and on the pharmacotherapeutical approaches to their effective healing.

Assessment: Written and oral examinations, colloquia during the practicals.

BIOPHARMACEUTICS AND PHARMACOKINETICS: ECTS credits 10,0

Horarium:	Lectures	30	Weeks	15
	Seminars	90	Weeks	15

Semester: 9

Contents: Drug delivery systems - development and characterization; stability and stabilization of drugs, methods of assessment of the drug stability and of prediction of the drug shelf-life. Methods for the biopharmaceutical study of dosage forms; in vitro release and dissolution - mathematical evaluation and modes of presentation of the results. Pharmaceutical and bio-equivalence of drug preparations.

Objectives: To provide knowledge on modern drug delivery systems; basic methods for the evaluation of drug stability and stabilization, biopharmaceutical characterization of drug dosage forms.

Assessment: Tests, practical examinations, written and oral examinations

BROMATOLOGY: ECTS credits 5,0

Prerequisites: Successfully passed examinations on Pharmaceutical Chemistry and Analytical Chemistry.

Horarium:	Lectures	30	Weeks	15
	Practicals	30	Weeks	15

Semester: 9

Contents: Composition of foods - proteins, fats, carbohydrates, vitamins, mineral salts, nutrient additives. Drug-food interactions on the level of resorption, distribution, metabolism, excretion. Food-poisonings of chemical and microbiological origins.

Objectives: To assure knowledge of the methods of food analysis and of the drug-food interactions.

Assessment: Colloquium, written and oral examinations.

PHARMACOGNOSY, Part 2: ECTS credits 7,0

Prerequisites: Successfully passed examination on Pharmacognosy, Part 1.

Horarium:	Lectures	30	Weeks	15
	Seminars	12	Weeks	3
	Practicals	48	Weeks	12

Semester: 9

Contents: Extraction of drugs from freely growing and cultivated medicinal plants - advantages and drawbacks. Standardization of drugs and standard documents. Methods of isolation, identification, qualitative and quantitative analysis of biologically active substances of vegetal origin. Types of phytopreparations and stages of their manufacturing. Phytopreparations from various groups naturally occurring substances. Chemotaxonomy and significance for pharmacy.

Objectives: On the basis of the theoretical knowledge acquired from Pharmacognosy, Part 1, to provide the students with practical skills in this respect.

Assessment: Examination oral and written.

PHARMACEUTICAL CARE: ECTS credits 6,0

Prerequisites:

Horarium:	Lectures	30	Weeks	15
	Practicals	45	Weeks	15

Semester: 9

Contents: Scientific principles and international requirements at every stage of drug therapy for the purpose of achieving the elimination or reduction of a patient's symptomatology; arresting or slowing of a disease process; or preventing a disease or symptomatology. This process requires a review of patient's medication with reference to the doctor's diagnoses, laboratory tests and patient's information. It teaches good communication skills in order to gain a correct understanding of the relevance and impact of the various medications on the patient's pathology.

Objectives: Knowledge of the modern strategies in providing quality and safety at every stage of drug treatment.

Assessment: Examination.

ELECTIVE COURSE, Part 2: ECTS credits 5,0

Prerequisites:

Horarium:	Lectures	30	Weeks	15
	Practicals	30	Weeks	15

Semester: 9

Contents: depends on the course

Objectives: Knowledge of the basic theoretical requirements and practical skills related to this teaching subject.

Assessment: Examination in written.

FACULTY OF PUBLIC HEALTH



Address: 8 Bialo more Str., 1527 Sofia
<http://foz.mu-sofia.bg>
<http://foz.free.bg>

Dean: Professor Tzecomir Vodenitcharov, MD, PhD, DSc

Tel. +359 2 9432 304

Fax. +359 2 9432 127

E mail: publichealth@bitex.com

Faculty Coordinator: Prof. Antoniya Yanakieva, PhD

Department of Health Technology Assessment

Tel. +359 2 851 01 22

Mob. +359 896 783 261

E-mail: antoniya.yanakieva@gmail.com

The Faculty of Public Health was found in 2001. The Faculty of Public Health is a modern university formation for introducing students and graduates to the managerial science specific for the health sector – management of public health.

The Faculty of Public Health includes seven departments:

- Department of Health Policy and Management
- Department of Medical Ethics and Healthcare
- Department of Medical Pedagogy
- Department of Preventive Medicine
- Department of Health Economics
- Department of Occupational Medicine
- Department of Nursing Care

The mission of the faculty is in integration and creation of uniform methodological basis for educational and scientific activities in the field of public health. The faculty reflects the need for creation of a new generation of health managers with competencies and a new pluralistic managerial style consistent with the European standards. It will ensure intellectual and methodological support to health policy makers and the managers of the organizational change in the Bulgarian healthcare system.

The main objective of the faculty is the development of the science for public health. The activity is devoted to the management of ideas and resources in the public health sector. The major and key tasks include creation and formation of a new generation of health managers and assistance for the management of the healthcare reform.

The faculty provides training in the following specialties:

- Bachelor’s and Master’s degree of public health and health management
- Bachelor’s and Master’s degree of health care
- The faculty of Public Health provides also training in nursing. Nurses and midwives who graduated successfully are awarded Bachelor’s educational degree after 4 years course.

Curriculum

The subjects are grouped in several modules:

- Health Sciences
- Medical Sciences
- Economic Sciences
- Legal Sciences
- Management Sciences
- Social and Behavior Sciences

I. SPECIALTY “PUBLIC HEALTH AND HEALTH MANAGEMENT”, BACHELOR DEGREE

FULL – TIME/ ECTS credits: 240

Total	Horarium	Lectures	Practical exercises	Semesters
	2065	820	1245	8

II. SPECIALTY “PUBLIC HEALTH AND HEALTH MANAGEMENT”, BACHELOR DEGREE

PART – TIME/ ECTS credits: 240

Total	Horarium	Lectures	Practical exercises	Semesters
	1123	489	628	8

III. SPECIALTY “PUBLIC HEALTH AND HEALTH MANAGEMENT”, MASTER DEGREE,

AFTER BACHELOR DEGREE, FULL – TIME/ECTS credits: 68

Total	Horarium	Lectures	Practical exercises	Semesters
	565	280	285	2

IV. SPECIALTY “PUBLIC HEALTH AND HEALTH MANAGEMENT”, MASTER DEGREE,

FULL – TIME/ECTS credits: 65

Total	Horarium	Lectures	Practical exercises	Semesters
	565	265	270	2

V. SPECIALTY “OCCUPATIONAL MEDICINE AND WORKING CAPACITY”, BACHELOR DEGREE, PART – TIME /ECTS credits: 60

Total	Horarium	Lectures	Practical exercises	Semesters
	900			3

VI. SPECIALTY “HEALTHCARE MANAGEMENT”, BACHELOR DEGREE, FULL – TIME /ECTS credits: 160

Total	Horarium	Lectures	Practical exercises	Semesters
	1585	640	945	5

VII. SPECIALTY “HEALTHCARE MANAGEMENT”, BACHELOR DEGREE, PART – TIME /ECTS credits: 160

Total	Horarium	Lectures	Practical exercises	Semesters
	914	311	603	6

VIII. SPECIALTY “HEALTHCARE MANAGEMENT”, MASTER DEGREE AFTER BACHELOR DEGREE IN SOCIAL ACTIVITITES, SOCIAL PEDAGOGY, SOCIAL MANAGEMENT OR HEALTH MANAGEMENT (RCM 215), FULL – TIME /ECTS credits 66:

Total	Horarium	Lectures	Practical exercises	Semesters
	565	239	326	3

IX. SPECIALTY “HEALTHCARE MANAGEMENT”, MASTER DEGREE, FULL – TIME/ECTS credits: 60

Total	Horarium	Lectures	Practical exercises	Semesters
	360	172	188	2

X. SPECIALTY “NURSE”, BACHELOR DEGREE, FULL – TIME /ECTS credits: 240

Total	Horarium	Lectures	Practical exercises	Semesters
	5433	913	4520	8

XI. SPECIALTY “MIDWIFE”, BACHELOR DEGREE, FULL – TIME /ECTS credits: 240

Total	Horarium	Lectures	Practical exercises	Semesters
	5448	969	4479	8

**XII. SPECIALTY “KINEZITHERAPY”,
BACHELOR DEGREE, FULL – TIME /ECTS credits: 240**

Total	Horarium	Lectures	Practical exercises	Semesters
	4660	989	3671	8

**XIII. SPECIALTY “PHYSICIAN ASSISTANT”,
BACHELOR DEGREE, FULL – TIME /ECTS credits: 240**

Total	Horarium	Lectures	Practical exercises	Semesters
	5448	1195	4253	8

**XIV. SPECIALTY “OCCUPATIONAL MEDICINE AND WORKING
CAPACITY”, BACHELOR DEGREE, FULL – TIME /ECTS credits: 240**

Total	Horarium	Lectures	Practical exercises	Semesters
	3852	1490	2362	8

**XV. SPECIALTY “STRATEGIC MANAGEMENT AND PHARMACEUTICAL
OPERATIONS”,
MASTER DEGREE, PART – TIME /ECTS credits: 60**

Total	Horarium	Lectures	Practical exercises	Semesters
				2

**XVI. SPECIALTY “MEDICAL REHABILITATION, KINEZITHERAPY
AND BALNEOLOGY”,
MASTER DEGREE, FULL – TIME /ECTS credits: 126**

Total	Horarium	Lectures	Practical exercises	Semesters
	1650	595	1055	4

**XVII. SPECIALTY “CLINICAL HEALTHCARE”,
MASTER DEGREE, FULL – TIME /ECTS credits: 120**

Total	Horarium	Lectures	Practical exercises	Semesters
	1365	358	1007	4

SPECIALTY “PUBLIC HEALTH AND HEALTH MANAGEMENT”

Introduction in specialty ECTS credits: 6

Horarium:

Semester 1	Lectures	15
	Practical exercises	15

Semesters: 1

Contents: The program aims to develop in the student practical skills like:

- views on the role and essence of the health management
- critical analysis of problems
- understanding of the issues and priorities of the health system

Objectives: The main objective of the discipline is to form modern views on the essence of the future profession of the students.

Assessment:

- theoretical exams
- semester examination

Hygiene and ecology ECTS credits: 6

Horarium:

Semester 1	Lectures	30
	Practical exercises	30

Semesters: 1

Contents: The program aims to develop the students' practical skills like:

- day-to-day therapeutic and prophylactic activities

Objectives: "Hygiene and ecology" is a subject connected with the application of the hygienic requirements in everyday life, labour, nutrition, personal hygiene of children, adolescent and adults for the purpose of protecting their health and working capacity, as well as establishment of active health position of the society.

Assessment: Semester examination

Introduction in Healthcare management ECTS credits: 9

Horarium:

Semester 1	Lectures:	30
	Practical exercises:	30

Semesters: 1

Contents: The program aims to develop the students' practical skills like:

- view on the role and essence of the health management
- critical analysis of problems
- understanding of the issues and priorities of the health system

Objectives: The main objective of the discipline is to form modern views on health management and the priorities of health policy, to develop skills in management and into making management decisions.

Assessment:

- theoretical exams
- semester examination

Introduction in Economy ECTS credits: 9

Horarium:

Semester 1	Lectures	30
	Practical exercises	30

Semesters: 1

Contents: The program aims to develop in the student practical skills like:

- Knowledge of basic concepts and theories
- Orientation in the economical aspects
- Applying of economical approaches

Objectives: The main objective is to gain knowledge about basic economic theories and concepts like: market, offers, marketing. The discipline presents the place of the health system in the economy.

Assessment:

- theoretical exams
- semester examination

Latin with medical terms ECTS credits:

Horarium:

Semester 1	Lectures	15
	Practical exercises	15

Semesters: 1

Contents: The program aims to help students' understand and use Latin medical terminology in their future profession.

Objectives: The main objective is the students to assimilate basic Latin terminology.

Assessment: Tests

Social Medicine ECTS credits: 8

Horarium:

Semester 2	Lectures	30
	Practical exercises	30

Semesters: 1

Contents: The program aims to develop the students' practical skills like:

- Making of socio-medical analysis
- Discovering and solving socio-medical problems
- Knowledge about the Social Medicine and its connection with the Public Health

Objectives: The main objective is to form socio-medical approach and way of thinking in the students. They will be able to identify problems of public health and find a way of solving them.

Assessment: theoretical exams

Accounting and control ECTS credits:6

Horarium:

Semester 2	Lectures	30
	Practical exercises	30

Semesters: 1

Contents: The program aims to develop the students' practical skills like:

- Theoretical knowledge in the sphere of accounting and control
- Skills for financial-accounting analysis and economical units

Objectives: The main objective is to form the students' financial way of thinking, to acquire knowledge about accounting and control.

Assessment:

- theoretical exams
- semester examination

Medical ethics and deontology ECTS credits: 7

Horarium:

Semester 2	Lectures	30
	Practical exercise	30

Semesters: 1

Contents: The program aims to develop the students' practical skills like:

- applying basic ethical principles
- solving ethical dilemmas
- identifying of ethical aspects

Objectives: The main objective of the discipline is to familiarize the students with the primary purpose of teaching Medical Ethics and Deontology

Assessment:

- seminars
- Theoretical exam
- Solving ethical dilemmas
- presenting ethical dilemmas

Latin language and medical terminology ECTS credits: 5

Horarium:

Semester 2	Lectures	15
	Practical exercises	15

Semesters: 2

Contents: The program aims to help students understand and use Latin medical terminology in their future profession.

Objectives: The main objective is the students to assimilate basic Latin terminology.

Assessment: Tests

Optional Discipline:

Social Activities in Public Health

Contents: The program aims to develop the students' practical skills like:

- Knowledge about the organization and management of the social activities
- Searching and using of the basic social and health models of behavior
- Knowledge about the social legislation

Objectives: The main objective of the discipline is to familiarize the students with the management activities, aimed at social work.

Assessment: Semester examination

Mandatory Disciplines:

Management of resources in Health ECTS credits: 6

Horarium:

	Lectures	Semester 3	30
	Practical exercises	30	

Semesters: 1

Contents: The program aims to develop the students' practical skills like:

- Understanding of the essence and the role of the resources for the health system
- To take adequate management solutions
- To discover new or hidden resources

Objectives: The main objective is to familiarize the students with the different resources in the health system and the dependences between them.

Assessment:

- theoretical exams
- semester examination

Organization and ergonomics in health establishment ECTS credits: 4

Horarium:

Semester 3	Lectures	30
	Practical exercises	30

Semesters: 1

Contents: The program aims to develop the students' practical skills as:

- To apply new models of management and technologies, used in hospital care
- To have critical evaluation of the results from researches

Objectives: The main objective is to familiarize the students with the management technologies in the health system and with the hospital structure.

Assessment:

- projects
- Seminars
- semester examination

Medical sociology ECTS credits: 6

Horarium:

Semester 3	Lectures	20
	Practical exercises	30

Semesters: 1

Contents: The program aims to develop the students' practical skills like:

- Analyzing and interpreting the condition of the public health
- To receive knowledge and skills about the use of all kind researches

Objectives: The main objective is for the students to acquire knowledge about the research, structure and the matter of the discipline Medical Sociology.

Assessment: semester examination

Health epidemiology ECTS credits: 6

Horarium:

Semester: 3	Lectures	20
	Practical exercises	30

Semesters: 1

Contents: The program aims to develop the students't practical skills like:

- Acknowledging the basic epidemiological terms
- planning and conducting epidemiological researches

Objectives: The main objective is to familiarize the students with the meaning and the point of epidemiology and obtaining skills for using different kind of epidemiological researches.

Assessment:

- projects
- Seminars
- semester examination

Financial Management in Health ECTS credits: 4

Horarium:

Semester: 3	Lectures	20
	Practical exercises	30

Semesters: 1

Contents: The program aims to develop the students' practical skills like:

- Basic knowledge about the finance system
- Organizing and management of the financial activity
- To evaluate the effectiveness of the health structure

Objectives: The main objective is to familiarize the student with the theoretical basis, functions and matter of the Financial Management.

Assessment:

- projects
- Seminars
- semester examination

Methods of practical training in the majors from the professional field of healthcare ECTS credits: 4

Horarium:

Semester 3	Lectures	
	Practical exercises	36

Semesters: 1

Contents: The program aims to develop the students' practical skills like:

- Possibility of using the information system
- Presenting the different kinds of documents for the patients

Objectives: The main objective is to familiarize the students with the role of the information system in the hospitals and to teach them how to use it.

Assessment: participating in seminar

Methods of health training and education ECTS credits: 4

Horarium:

Semester 4	Lectures	20
	Practical exercises	20

Semesters: 1

Contents: The program aims to develop the students' practical skills like:

- Understanding the principles of pedagogy
- Understanding the features of the people, social environment, ethnicities and etc.

Objectives: The main objective is the students to acquire pedagogical knowledge to support processes of health care, education, adaptation, rehabilitation and etc.

Assessment:

- Test
- Oral examination

Organization and ergonomics in health establishment and emergency ECTS credits: 4

Horarium:

Semester 4	Lectures	20
	Practical exercises	25

Semesters: 1

Contents: The program aims to develop the students' practical skills like:

- Familiarizing basic concepts, functions and principles of the emergency

Objectives: The main objective is to form the students' knowledge about the emergency and its role and functions in the health system.

Assessment: semester examination

Drug policy ECTS credits: 6

Horarium:

Semester 4	Lectures	20
	Practical exercises	20

Semesters: 1

Contents: The program aims to develop the students' practical skills like:

- Knowledge about the main rules and legislation about the drug policy
- Knowledge about the drug regulatory authorities
- Knowledge about the rules of making medicines
- Marketing knowledge about drug policy

Objectives: The main objective is to familiarize the students with the rules and the reaching of the medicines to the market, in order to be sold.

Assessment:

- Test
- Semester examination
- Oral examination

Management of Information – Documentary Activity ECTS credits: 4

Horarium:

Semester 4	Lectures	20
	Practical exercises	20

Semesters: 1

Contents: The program aims to develop the students' practical skills like:

- Understanding the essence and the role of the information
- Analyzing the necessary information
- Modeling future processes

Objectives: The main objective is to present to the students the role of the information and the information technologies in the health system

Assessment:

- Semester examination
- Test
- Seminars

Role of the Health Manager in Occupational Medicine ECTS credits: 4

Horarium:

Semester 4	Lectures	20
	Practical exercises	20

Semesters: 1

Contents: The program aims to develop the students' practical skills like:

- Familiarizing the students with the terminology and the main sources of information
- introducing the basic determinants of occupational health
- providing academic training for protecting health, safety and efficiency

Objectives: The main objective is for the students to acquire knowledge and skills, necessary for operational management in a health establishment.

Assessment:

- semester examination
- Test
- Seminars

Methods of Practical training in the professional field of healthcare ECTS credits: 4

Horarium:

Semester 4	Lectures	
	Practical exercises	36

Semesters: 1

Contents: The program aims to develop in the student practical skills like:

- Possibility of using the information system
- Presenting the different kinds of documents for the patients

Objectives: The main objective is to familiarize the students with the role of the information system in the hospitals and to teach them how to use it.

Assessment: participating in seminar

Elective Disciplines

Bioethics ECTS credits: 4

Horarium:

Semester 4	Lectures	20
	Practical exercises	20

Semesters: 1

Contents: The program aims to develop the students' practical skills like:

- Knowledge of methods and terminology in the sphere of bioethics
- Knowledge of the contemporary trends in the discipline
- Evaluating the programs in the healthcare system

Objectives: The main objective is to help students to identify and analyze bioethical problems in the medicine and health system.

Assessment:

- semester examination
- practice examination
- theory examination

Time Management ECTS credits: 4

Horarium:

Semester 4	Lectures	20
	Practical exercises	20

Semesters: 1

Contents: The program aims to develop in the students practical skills like;

- Assimilating and organizing time in the right way
- Analyzing the specificity of time
- **Objectives:** The main objective is to form adequate attitude of the students about the distribution of time.

Assessment: semester examination

Mandatory disciplines

Health insurance ECTS credits: 6

Horarium:

Semester 5	Lectures	20
	Practical exercises	30

Semesters: 1

Contents: The program aims to develop in the student practical skills like:

- Knowledge about the health insurance models
- History of the health insurance
- Role, purpose and position of the health insurance in the health policy

Objectives: The main objective is for the students gain knowledge, skills and competences into the general Health Insurance models.

Assessment: semester examination

Health Promotion ECTS credits: 7

Horarium:

Semester 5	Lectures	20
	Practical exercises	30

Semesters: 1

Contents: The program aims to develop in the student practical skills like:

- Knowledge about the causes of diseases
- Knowledge about preventing strategies
- Knowledge and motivation about healthy lifestyle

Objectives: The main objective is for the students gain knowledge, skills and competences in activities, related to public health.

Assessment: semester examination

Strategic Management in Health ECTS credits: 7

Horarium:

Semester 5	Lectures	30
	Practical exercises	30

Semesters: 1

Contents: The program aims to develop in the students practical skills like:

- Developing of strategic way of thinking
- Acquiring strategic skills
- Ability to think about the future

Objectives: The main objective of the discipline is for the students to acquire knowledge and skills about the Strategic Management and its role in the Health System. **Assessment:** semester examination

Models of Financing in Health System ECTS credits: 6

Horarium:

Semester 5	Lectures	30
	Practical exercises	30

Semesters: 1

Contents: The program aims to develop in the student practical skills like

- Knowledge about the Models of Financing in the Health System
- Applying the Models of Financing in the Health System

Objectives: The main objective is to familiarize the students with the main Models of Financing in the Health System.

Assessment: Semester examination

Methods of practical training and Practical Seminar ECTS credits: 3

Horarium:

Semester 5	Lectures	
	Practical exercises	36

Semesters: 1

Contents: The program aims to develop in the students practical skills like:

- Possibility of using the information system
- Presenting the different kinds of documents for the patients

Objectives: The main objective is to familiarize the students with the role of the information system in the hospitals and to teach them how to use it.

Assessment: participating in seminar

Communication Skills ECTS credits: 7

Horarium:

Semester 6	Lectures	20
	Practical exercises	30

Semesters: 1

Contents: The program aims to develop in the student practical skills like:

- Theoretical basis of professional communications
- Applying communicative skills and methods
- Overcome of conflict situations

Objectives: The main objective of the discipline is to teach the students how to communicate effectively, to deal with conflict situations in order to conduct effective management.

Assessment: Semester examination

Medical statistics and medical informatics ECTS credits: 7

Horarium:

Semester 6	Lectures	20
	Practical exercises	30

Semesters: 1

Contents: The program aims to develop in the student practical skills like:

- Knowledge about the role and the importance of the information in the society
- Role of the information for the development of society
- Use of the technologies in healthcare

Objectives: The main objective is to acquire skills in the systematic processing of the information in healthcare.

Assessment: Semester examination

Health Marketing ECTS credits: 6

Horarium:

Semester 6	Lectures	20
	Practical exercises	30

Semesters: 1

Contents: The program aims to develop in the student practical skills like:

- To form Marketing way of thinking in the students
- Knowledge about the basic theory and methods of Marketing

Objectives: The main objective is to familiarize the students with the Marketing, its role and importance for the Health System.

Assessment: Semester examination

Practice in outpatient care ECTS credits: 4

Horarium:

Semester 1	Lectures	
	Practical exercises	36

Semesters: 6

Contents: The program aims to develop in the student practical skills like:

- Possibility of using the information system
- Presenting the different kinds of documents used in hospitals

Objectives: The main objective is to familiarize the students with the role of the information system in the hospitals and to teach them how to use it. **Assessment:** participating in seminar

Patient rights ECTS credits:5

Horarium:

Semester 7	Lectures	20
	Practical exercises	30

Semesters: 1

Contents: The program aims to develop in the student practical skills like:

- Knowledge about the patient rights
- Effective Communication with patients
- Role of the patient in the Healthcare system

Objectives: The main objective is to familiarize the students with the Patient rights.

Assessment: Semester examination

Basis in occupational medicine ECTS credits: 5

Horarium:

Semester 7	Lectures	20
	Practical exercises	30

Semesters: 1

Contents: The program aims to develop in the student practical skills like:

- Knowledge about basic terminology, sources of information and role of the occupational medicine

Objectives: The main objective is for the students to acquire skills in activity of employment of medical workers.

Assessment: Semester examination

Problems of aging ECTS credits: 5

Horarium:

Semester 7	Lectures	20
	Practical exercises	30

Semesters: 1

Contents: The program aims to develop in the student practical skills like:

Knowledge about the major world medical theories of aging

Objectives: The main objective is to acquaint the students with psychological implications of aging, promoting healthy lifestyle and medical services.

Assessment: Semester examination

Occupational and Administrative Law ECTS credits: 5

Horarium:

Semester 7	Lectures	20
	Practical exercises	30

Semesters: 1

Contents: The program aims to develop in the student practical skills like:

- Acquire legal training in the healthcare system

Objectives: The main objective of the discipline is to familiarize the students with the basic laws and regulations.

Assessment:

- Tests
- Group discussions
- Semester examination

Practice in outpatient care and Practical Seminar ECTS credits: 5

Horarium:

Semester 7	Lectures	
	Practical exercises	36

Semesters: 1

Contents: The program aims to develop in the student practical skills like:

- Possibility of using the information system
- Presenting the different kinds of documents for the patients

Objectives: The main objective is to familiarize the students with the role of the information system in the hospitals and to teach them how to use it.

Assessment: participating in seminar

International Health Cooperation ECTS credits: 6

Horarium:

Semester 7	Lectures	20
	Practical exercises	30

Semesters: 1

Contents: The program aims to develop in the student practical skills like:

- Preparing students for work in International Health Organizations
- Stimulates building of partnerships
- Increasing the quality of health activities

Objectives: The International Health Cooperation is an essential element of contemporary national and international health policy. This discipline is a basic principle, used in strategies for national and international health.

Assessment:

- Semester examination
- Participating in seminar

Health Law ECTS credits: 8

Horarium:

Semester 8	Lectures	20
	Practical exercises	30

Semesters: 1

Contents: The program aims to develop in the student practical skills like:

- Exercise manager skills in health law

Objectives: The main objective is to familiarize the students with the legal regulation in health and the basic health laws.

Assessment: Semester examination

Sport ECTS credits: 8

Horarium:

Semester 8 Lectures 90

Semesters: 1

Assessment:

- Continuous assessment
- Final exam

SPECIALTY “NURSE”

Philosophy and introduction to nursing. Theoretical bases ECTS credits: 12

The theoretical and practical training in this subject is focused on acquiring knowledge and skills for professional observation and assessment of the care needed by healthy and sick persons. The philosophy of nursing is focused on planning and providing nursing care in the period of illness and recovery by covering the physical, mental and social aspects of life in a manner they influence health, sickness, disability and death.

Grading – complex grading by two methods:

By continuous assessment and final exam

Methods of examination and assessment:

oral, in writing, didactic tests, practical tasks solving, case studies, etc.

Aspects of grading:

- participation in discussion at seminars;
- paperwork;

Nursing care for patients with surgical diseases ECTS credits: 5

The subject "Nursing care for patients with surgical diseases" gives knowledge on general and special nursing care in various surgical directions.

Care for patients in the pre-operative and post-operative period is studied in details.

The individual nursing activities related to blood transfusion, punctures and dressings are defined.

Special nursing care is taught by systems and organs including nursing care related to the use of modern endoscopic methods of surgery.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, tests taking, practical tasks solving, case studies, scholarly essays, etc.

Nursing care for patients with somatic diseases ECTS credits: 6

The subject "Nursing care for patients with somatic diseases" gives knowledge to nurses on general and special care classified by organs and systems. Based on biological and medical knowledge is determined care, which a nurse should be able to plan and implement.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, didactic tests, practical tasks taking, case studies, scholarly essays, etc.

Nursing care for patients with oncological diseases ECTS credits: 2

The subject "Nursing care for patients with oncological diseases" gives knowledge and practical skills for providing adequate and professional care to patients with oncological diseases based on the modern oncology.

Grading – complex grading by two methods: by the student's activities in the course of study, assessment by practical and theoretical examination.

Aspects of grading:

- participation in discussion at seminars;
- paperwork;

Paediatric nursing ECTS credits: 3

The subject “Paediatric nursing” gives knowledge for the specifics of the children's development in different periods. It provides to the students knowledge of the factors of the physical and neuropsychic development, disorders and nursing care for sick children.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, tests taking, practical tasks solving, case studies, scholarly essays, etc.

Nursing care for patients with neurological diseases ECTS credits: 3

The purpose of this subject is that students gain knowledge on nursing care for patients with neurological diseases so that they acquire skills for planning and providing care and tests of the nervous system.

Grading – by two methods:

- by continuous assessment and final exam
- methods of examination and assessment: oral, in writing, tests, tests taking, practical tasks solving, case studies, scholarly essays, etc.

Nursing care for patients with mental diseases ECTS credits: 2

The purpose of this subject is that students gain theoretical knowledge in the area of nursing for patients with mental diseases. The students will acquire practical skills to support patients with mental diseases in the process of re-socialization and reintegration.

Grading – complex grading by two methods: by the student's activities in the course of study, assessment by practical and theoretical examination.

Aspects of grading:

- participation in discussion at seminars;
- paperwork;

Nursing for young mothers and newly-born babies ECTS credits: 2

The purpose of this subject is that students gain knowledge on providing care for young mothers and first care for newly-born babies. Students will acquire practical knowledge on nursing care for newly-born babies in the delivery room, the maternity ward and at home.

Grading – complex grading by two methods: by the student's activities in the course of study, assessment by practical and theoretical examination.

Aspects of grading:

- participation in discussion at seminars;
- paperwork;

Nursing for ENT diseases ECTS credits: 2

The purpose of the subject is that students gain knowledges on nursing care for patients with ENT diseases and acquire skills for planning and providing care and testing ENT systems. Students will acquire practical skills for preparation and participation of patients in special tests.

Grading – complex grading by two methods: by the student's activities in the course of study, assessment by practical and theoretical examination.

Aspects of grading:

- participation in discussion at seminars;
- paperwork;

Nursing care for the elderly ECTS credits: 4

The purpose of this subject is that the students gain knowledge on the old age, the anatomical, physiological and mental changes of the elderly and acquire skills for assessment of the needs of care and its providing. To acquire practical skills for providing of complex care for the elderly.

Grading – complex grading by two methods: by the student's activities in the course of study, assessment by practical and theoretical examination.

Aspects of grading:

- participation in discussion at seminars;
- paperwork;

Home visiting ECTS credits: 4

The purpose of this subject is that students gain knowledge on family medicine and the position of home visiting in the healthcare system and acquire practical skills for planning and providing of nursing care at the patient's home.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, tests taking, practical tasks solving, case studies, scholarly essays, etc.

Palliative nursing ECTS credits: 2

The purpose of this subject is that students gain knowledge on providing adequate and professional palliative care based on the modern trends of the palliative medicine and hospice care for the principles and organisation of palliative care. To acquire practical skills for assessment and analysis of the palliative care that terminal patients need.

Grading – complex grading by two methods: by the student's activities in the course of study, assessment by practical and theoretical examination.

Aspects of grading:

- participation in discussion at seminars;
- paperwork;

Nursing care for patients with infectious diseases ECTS credits: 3

The purpose of this subject is that students gain knowledge on nursing care for patients with infectious diseases and acquire skills for assessment and analysis of the care, which patients with infectious diseases need.

Grading – complex grading by two methods: by the student's activities in the course of study, assessment by practical and theoretical examination.

Aspects of grading:

- participation in discussion at seminars;
- paperwork;

Nursing for children and adults with disabilities ECTS credits: 4

The purpose of this subject is that students gain knowledge on nursing care for patients with disabilities and acquire skills for assessment and analysis of the care, which patients with disabilities need.

Grading – complex grading by two methods: by the student's activities in the course of study, assessment by practical and theoretical examination.

Aspects of grading:

- participation in discussion at seminars;
- paperwork;

Nursing for resuscitation and intensive care

The purpose of this subject is that students gain knowledge on providing intensive nursing care and for the activities of anaesthetic nurse. To acquire practical skills for intensive nursing care and resuscitation measures. To acquire skills for adequate professional conduct in anaesthesiology, resuscitation and intensive care.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, tests taking, practical tasks solving, case studies, scholarly essays, etc.

Human anatomy and clinical pathology ECTS credits: 2

The purpose of this subject is that students gain knowledge for the human anatomy, anatomical approach for their examination. To gain knowledge for morphological changes, mainly on macro-and microscopic level upon general pathological processes and by nosologic units distributed by organs and systems. To gain knowledge about the interrelation between structural specifics and the function, as well as the adaptive reactions of the overall organism to the changing environment.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests taking, practical tasks solving, etc.

ECTS credits: 3

Human physiology and pathological physiology ECTS credits: 3

The subject 'Human physiology and pathological physiology' is the science, which studies the normal functioning of the organs and the systems of the human organism, the principles of the nervous and humoral regulation and the connection between the organism and the environment.

Pathological physiology is the science which studies the key and the general regularities of occurrence, the mechanisms of action and the outcome from the diseases. It is connected with studying the functional disorders in the sick person.

The subject "Human physiology and pathological physiology" is an important linking unit between the fundamental, general theoretical and clinical subjects.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, tests taking, practical tasks solving, etc.

Microbiology, parasitology and virology ECTS credits: 2

The purpose of the subject is that students gain the required theoretical and practical knowledge on the subject "Microbiology, parasitology and virology", which will contribute to their future work. To know the most frequent causers of infections, approaches for diagnostics, how to use the opportunities of the laboratory in microbiology and virology and also to interpret correctly the obtained results. To be informed and to gain knowledges on the modern approaches for prevention and control of infections, as well as ensuring safety of the patients and the medical staff. The training programme includes the key issues from the medical microbiology giving knowledge to the students about the key characteristics of the micro-organisms of medical relevance; approaches and methods of isolation, identification and testing the anti-microbe sensitivity of bacteria; aetiological meaning; the role of the laboratory in microbiology in the process of diagnostics of the infectious processes. It includes issues from the area of the hospital hygiene, prevention and control of infections connected with medical service.

Grading: By continuous assessment and final exam

Methods of examination and assessment: Oral and in writing

Tests on assigned topic, practical tasks, cases

Pharmacology ECTS credits: 3

The purpose of training in pharmacology is that future specialists gain knowledges on: selected issues of the general pharmacology, modern data for pharmacodynamics, pharmacokinetics, interactions between drugs, with food, with laboratory indicators, adverse effects, indications for their application and factors which influence them.

The recent decades are characterized with creation and implementation in the world therapeutic practice of new drugs, new dosage forms and even brand new pharmaco therapeutic groups. This is reflected upon the development of the biggest section of the curriculum - the special pharmacology. In addition to the pharmacological classification the students gain knowledges about the Anatomical Therapeutic Chemical Classification System (ATC code) of the WHO, which is adopted in Bulgaria.

The task of the training is to gain knowledge about the pathological - physiological mechanisms drug and non-drug poisoning and the principles of its treatment.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, practical tasks taking, case studies, scholarly essays, etc.

Medical devices in nursing ECTS credits: 1

The subject gives theoretical and practical knowledge and skills required for the application of the regularities when using physical and biophysical principles of electrographic diagnostic methods for diagnostics and therapy, as well as for hygiene, prophylaxis and maintenance of medical devices.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, tests taking, practical tasks solving, case studies, scholarly essays, etc.

Image diagnostics in the nursing practice ECTS credits: 1

The subject Image diagnostics in the nursing practice give theoretical and practical knowledge and skills, which the future nurses need in order to handle the increasingly sophisticated medical diagnostics equipment. Along with that students acquire skills to prepare the patient for contrast X-ray scanning and gain knowledge and experience on the administration of contrast matters, the ability to prevent the occurrence of different allergic reactions and the complications thereof.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, tests taking, practical tasks solving, case studies, scholarly essays, etc.

Medical genetics ECTS credits: 2

The course of lectures covers two sections. The first section is theoretical. It includes the biological fundamentals of the medical genetics, the classification of the hereditary diseases and the methods of genetic tests. The second section covers the special part and particularly the application of the medical genetics in the practical healthcare. It identifies the modern diagnostic achievements on cellular and molecular level, proving the predisposition to genetic diseases, medical genetic consulting, etc. A special focus is made on patients with increased risk and proven predisposition to a diseases, the significance of DNA methods for diagnostics, as well as conducting mass and selective screening.

Grading – complex grading by two methods:

By continuous assessment and final exam

Methods of examination and assessment:

oral, in writing, didactic tests, practical tasks solving, case studies, etc.

Aspects of grading:

- participation in discussion at seminars;
- paperwork;

Physical therapy and rehabilitation ECTS credits: 1

The discipline **Physical therapy** gives knowledge in the field of physical prophylaxis, the application of the physical factors for the prophylaxis, treatment and rehabilitation of diseases. The process of rehabilitation includes also the role of occupational therapy, sports therapy, etc.

The purpose is that students gain knowledge about the application of the natural and preformed physical factors for prophylaxis, treatment and rehabilitation of diseases - internal, neurological, surgical, orthopaedic, gynaecological, eye, otorhinologic, paediatric, etc. in combination with different forms of active and passive kinesiotherapy. The fundamentals of physical prophylaxis, recreation and rehabilitation are presented as a philosophy, public behaviour, content and principles for their organization.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, practical tasks taking, case studies, scholarly essays, etc.

Hygiene and ecology ECTS credits: 2

"Hygiene and ecology" is a subject forming theoretical and practical skills in students required for their day-to-day therapeutic and prophylactic activities. It is connected with the application of the hygienic requirements in everyday life, labour, nutrition, personal hygiene of children, adolescent and adults for the purpose of protecting their health and working capacity as well as establishment of active health position of the society.

Grading – by two methods:

By continuous assessment and final exam

Dietotherapy ECTS credits: 1

The purpose of this subject is that students gain theoretical knowledge in the field of therapeutic diet. To gain knowledge on the key and additional nutrients, the foods classification, the physiological norms of nutrition, the diet of the risk groups of the population. The students acquire practical skills for development of clinically reasonable diets for different diseases.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, practical tasks taking, case studies, scholarly essays, etc.

Latin with Medical Terms ECTS credits: 2

Teaching Medical Latin terminology provides opportunity to achieve literacy in medical terminology. To gain knowledge on the key principles of the Latin grammar and the word-formation is of key significance for the theoretical and practical training of the medical professionals because the European medicine in the course of its development has preserved and developed its terminological instrumentation on the basis of Latin.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests taking, practical tasks solving, etc.

Clinical laboratory, biochemistry and immunology ECTS credits: 1

The study programme in Clinical laboratory, biochemistry and immunology provides to the students knowledges of the key chemical processes occurring in the human organism and the regularities to which they are subject.

The programme gives opportunity to the students from the major Nursing to gain good theoretical knowledge and practical skills and abilities for activities connected with the clinical - laboratory diagnostics in compliance with the contemporary development of the medical science and practice. **Grading – by two methods:**

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, tests taking, practical tasks solving, case studies, scholarly essays, etc.

Internal diseases. Toxicology ECTS credits: 6

The clinical subject “Internal diseases” provides to students knowledge on the modern methods for diagnostics, treatment and prophylaxis of diseases. Theoretical and practical knowledge on internal diseases are based on the opportunities of the nurse to provide pre-medical aid, to work autonomously in the resuscitation and intensive care wards, to perform autonomously the prophylactic and dispensary activities.

Practical training at the patient's bed and nursing practice for each diseases unit are envisaged.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests taking, practical tasks solving, etc.

Geriatrics ECTS credits: 1

The subject "Geriatrics" is the science studying the senile changes of old age; ageing of mentality; the syndrome of "early ageing" and its prophylaxis; the issues concerning the situation of the elderly in the family and the society; nutrition; professional rehabilitation; preparation of elderly for retirement; social adaptation and ethical and deontological problems of old age.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, tests taking, practical tasks solving, etc.

Surgery ECTS credits: 5

The clinical subject "Surgery" provides to students knowledge of the structure and the organization of work in the surgery ward and the surgery block, the principles of aseptics and antiseptics. Its studying gives the students from the major Nursing the required knowledge of the types of traumatic damages, the acute local and the general specific and non-specific infection, bleeding and blood stasis, benign and malignant tumours, inflammatory ulcerous and neoplastic disease of individual organs and systems.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests taking, practical tasks solving, etc.

Anaesthesiology and intensive care ECTS credits: 3

The subject "Anaesthesiology and Intensive Care" provides to students knowledge on the organization of work at the clinics and wards of anaesthesiology, resuscitation and intensive care, with the structure and preparation of anaesthetic devices, anaesthetic drugs, nature and purpose of resuscitation. Students acquire practical skills required for the correct approach to anaesthesia, resuscitation and intensive care.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, practical tasks taking, case studies, scholarly essays, etc.

Infectious diseases and epidemiology ECTS credits: 2

The subject "Infectious Diseases and Epidemiology" is a science, which studies the aetiology, pathogenesis and clinical characteristics of the infectious nosology of diseases. It is medico-social science, which studies the distribution, the causes, the clinic, the treatment and prophylaxis of the most important, widely distributes, chronic and in some cases difficult to treat infectious diseases.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, tests taking, practical tasks solving, case studies, scholarly essays, etc.

Paediatrics and Neonatology ECTS credits: 3

The subject "Paediatrics and Neonatology" provides to students knowledge of the periods of foetal development, anatomical and physiological specificities of the child. It studies the aetiology, pathogenesis, the clinic, the progress and the complications of the main nosological categories of childhood.

The purpose is that students gain knowledge on the anatomical and physiological specificities of children, the main issues of prophylaxis and the most common diseases of childhood with the relevant age characteristics. Future nurses will acquire skills to ensure providing general nursing care upon servicing children and providing promotional and preventive care.

Grading – complex grading by two methods:

By continuous assessment and final exam

Methods of examination and assessment:

oral, in writing, didactic tests, practical tasks solving, case studies, etc.

Aspects of grading:

- participation in discussion at seminars;
- paperwork;

Obstetrics and gynaecology ECTS credits: 2

The subject "Obstetrics and Gynaecology" provides to students knowledge of the anatomy and physiology of the female genitals. Students gain knowledge on work with pregnant women, young mothers, and women with gynaecological diseases and operated women.

The programme aims to develop in the students a style of thinking, approaches and practical skills required for performance of comprehensive, prophylactic, therapeutic and organisational care focused on protection and the most correct functioning of the female genitals. A focus is put on the introduced modern achievements in obstetrics that have proven their efficiency with regard to prevention, diagnostics and treatment.

Grading – complex grading by two methods:

By continuous assessment and final exam

Methods of examination and assessment:

oral, in writing, didactic tests, practical tasks solving, case studies, etc.

Aspects of grading:

- participation in discussion at seminars;
- paperwork;

Nervous diseases and psychiatry ECTS credits: 2

The purpose of the subject is that students gain knowledges of the key principles and methods of nervous and psychiatric service for the most common problems in the interaction and interrelations between nurses and patients in psychiatric medical services. This programme stimulates the initiative and the creativity of psychiatric nurses for their own development and their inclusion in drug-free and instrument-free programmes in the psychiatric practice, i.e. in the psychotherapy, environment-based therapy, sociotherapy, in some special areas such as behaviouristic therapy, consulting (liaison) psychiatry, social support and humanization of the overall service. The material will be presented in a propaedeutic manner with a view to gaining theoretical knowledge of the clinical subject "Nervous diseases and Psychiatry" but focused mainly on the practical aspects such as models of professional nursing behaviour to individual groups of patients reviewed in individualized, differentiated, holistic and rather syndromologic than nosologic manner.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, case studies, scholarly essays, etc.

Eye diseases ECTS credits: 1

The subject "Eye diseases" provides to students knowledge on the major Nursing, the anatomy and physiology of the visual analyser, the specific eye drugs and the method of their administration.

The purpose of study is that students gain theoretical knowledge in anatomy and the main diseases of the visual analyser; to acquire minimum practical skills upon their drug treatment.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, tests taking, practical tasks solving, case studies, scholarly essays, etc.

ENT diseases ECTS credits: 1

The subject ENT Diseases is the subject, which provides to students knowledge of the major Nursing with anatomy and physiology of the hearing aid and particularly with otolaryngological diseases and the need of gaining adequate knowledge of this pathology.

The programme of study includes groups of diseases requiring immediate diagnosing and treatment both in general theoretical plan and the required practical focus.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, tests taking, practical tasks solving, case studies, scholarly essays, etc.

Skin and venereal diseases ECTS credits: 1

Dermatovenerology is the science which studies the skin diseases and the sexually transmissible diseases. It is medico-social science, which studies the distribution, the causes, the clinic, the treatment and prophylaxis of the most important, widely distributes, chronic and in some cases difficult to treat skin diseases and sexually transmissible diseases.

The purpose of the study programme is that students gain knowledge of the main skin diseases and sexually transmissible diseases and gain the basic theoretical and clinical knowledge and skills that will help them in performing diagnostic - therapeutic, sanitary - antiepidemic and health educational activities.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, tests taking, practical tasks solving, case studies, scholarly essays, etc.

Health promotion

The subject "Health promotion" gives to students knowledges of the practical approaches for the implementation of the modern complex programmes for health promotion. It makes a thorough review of the issues connected with healthcare in Bulgaria, its elements, the interrelations between them and the routes for its optimization. Gaining knowledge of the integral approach inherent to the health promotion is essential for the training of medical specialists.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, practical tasks taking, case studies, scholarly essays, etc.

Medical psychology ECTS credits: 1

Medical psychology is a subject, which forms the view for the human morbid suffering as a mental suffering deeply affecting the personality. Its studying gives the required knowledge of the psychological characteristics of the communication between medical specialists and patients. It clarifies the psychological aspects of illness and the methods of psychological influence on the process of healing. It is essential for the future nurses to provide adequate care to patients considering the psychological specifics of each case. The knowledge in the field of mental hygiene, psycho-prophylaxis and psychotherapy is also important.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, practical tasks taking, case studies, scholarly essays, etc.

Medical ethics and deontology ECTS credits: 2

The subject "Medical Ethics and Deontology" forms the moral views as a part of the professionalism of the medical specialist. It clarifies the main types of interrelations between a medical professional, patients and their close friends and relatives. It gives knowledges of the main moral values and relations in the medical profession and the codes for their regulation. An important part of this unity are the relations between the medical specialists and the rights and the obligations of all parties.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, practical tasks taking, case studies, scholarly essays, etc.

Children pedagogy and children psychology ECTS credits: 2

The subject "Children pedagogy and children psychology" studies the nature of the psychic development and its factors. It gives knowledge of the various age development periods of children.

The purpose is that students gain knowledge of the deviations in the mental development and the influence of the somatic diseases on the children's psychics and acquire knowledge of the methods for building pedagogical approach to healthy and sick children. To develop skills and instructive approach for work with children and their parents consistent with the age-development period.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, tests taking, practical tasks solving, etc.

Social and health law ECTS credits: 2

The subject "Social and health law" covers some key requirements for exercising the nursing profession and the need to have knowledge of the health law. In this regard, the trend of aligning the Bulgarian healthcare law to the European law and the trend to blame an attending physician or a nurse and not the collective body, i.e. the health establishment for harms caused to a patient, requires gaining basic knowledge of the responsibility while exercising the medical profession.

The purpose is that students gain knowledge of the legal norms in the field of social and health law that directly affect the professional activities of students from the major Nursing.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, tests taking, practical tasks solving, case studies, scholarly essays, etc.

Social medicine ECTS credits: 2

The subject "Social Medicine" develops a new style and manner of thinking and behaviour in compliance with the requirements the modern social - medical theory and practice. It makes a thorough review of the issues connected with healthcare in Bulgaria, its elements, the interrelations between them and the routes for its optimization.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, practical tasks taking, case studies, scholarly essays, etc.

Disaster medicine ECTS credits: 2

The purpose of this subject is to prepare the future specialists for the performance of their specific tasks for medical assurance of the rescue activities in case of natural disasters, technological and transport catastrophes and terrorist acts.

To clarify the key issues connected with the change of the environment, as well as the medical and biological effects of the destroying factors in a crisis situation.

To gain knowledge of the key principles, approaches and methods for defence of the population in case of natural disasters, production breakdowns, catastrophes and terrorist acts.

To study the adopted model of therapeutic - evacuation and hygienic - antiepidemic assurance of crises.

To study specificities of harms, defence, medical aid and treatment of traumatic, radiation, epidemiological and toxicological injuries.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, practical tasks taking, case studies, scholarly essays, etc.

Principles and methods of training ECTS credits: 3

The purpose of study is that future nurses gain knowledge for training patients in connection with their disease, their close friends and families.

With the inclusion of this subject in the curriculum the training of students becomes optimally close to the modern European trends and parameters in the development of medical education.

"Principles and methods of training" may help students in studying the subjects of the psychological - pedagogical cycle - general pedagogy, medical pedagogy, methods of practical training, psychology, as well as subjects in the field of public health - health promotion, medical sociology, health education, etc.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, practical tasks taking, case studies, scholarly essays, etc.

Computer Science ECTS credits: 4

Computer science is a subject that provides to the future specialists the opportunity to gain specific computer knowledge, skills to use computer means. To gain knowledge of the basics of the theory of information, technical and software means for data processing, Internet and used information systems in the country.

Grading – by two methods:

By continuous assessment and final exam

Methods of examination and assessment: oral, in writing, tests, practical tasks taking, case studies, scholarly essays, etc.

Sport ECTS credits: 4

The subject **Sport** is a necessary part of students' training. It regulates the physical and mental load, improves the locomotor skills and habits, preserves and improves the health status and their physical ability. It develops physical qualities which contribute to the successful practising of the studied majors.

Grading: By continuous assessment and final exam

Clinical practice

The main purpose of the study programme is: during the period of the clinical practices, as a member of a team in the healthcare units and in direct contact with healthy/ sick individual, group or community under the guidance of lecturers - nurses, in the cooperation and with the help of nurses, medical doctors and other medical staff from the health network, the students learn how to plan, implement and assess the rendered care and aid on the basis of acquired knowledge and skills in order to achieve the required professional competence as nurses.

Assessment

Continuous assessment and final exam

MEDICAL COLLEGE – SOFIA

Address: 3 Jordanka Filaretova str., Sofia

Director: Prof. Vihren Petkov, MD, PhD

Tel: + 915 46 46

Fax: +852 40 40

E mail: vihrenpetkov@mu-sofia.bg

Faculty Coordinator: Prof. Antoniya Yanakieva, PhD

Department of Health Technology Assessment

Tel. +359 2 851 01 22

Mob. +359 896 783 261

E-mail: antoniya.yanakieva@googlemail.com

The Medical College “J. Filaretova” is the oldest medical institution and largest medical education institution in Bulgaria for the education of medical specialists with college degree in the field of “health care”. Following the complete three year course of education, the successful graduates of the college are awarded the educational qualification entitled “professional bachelor in...”. The education at the Medical College is full-time.

The college degree educates its students by strictly following the latest educational plans and programs approved by Bulgarian Ministry of Science and Education and the other countries in the European Union.

The educational process is carried out by leading specialists from the Medical University – Sofia – Professors, Assoc. Professors, and Assistant Professors with Ph.D.

The practical education of the students is carried out in the most modern and prestigious hospitals, medical laboratories, facilities and etc. in the Medical University Sofia. There the students acquire, practice, and refine the practical skills that they will need in their career.

All the specialties in the Medical College “J. Filaretova” are some of the most needed professions in the world. All countries in EU have a staggering need for our capable and well trained specialists. According to a recent study most of our specialties ranked near the top of the “100 recession proof jobs”.

The building of the college is an architectural and cultural landmark and was donated by the famous Bulgarian patriot J. Filaretova over 110 years ago. The college has many modern lecture halls, laboratories, and cabinets equipped with modern medical and AV technology, the college also has a computer room, library, sports saloon and etc.



Specialty “Medical Laboratory Assistant”

Duration of education: 3 years

The motto of this specialty is: “Our goal is accuracy”.

The Medical Laboratory Assistant is the principal performer of a wide spectrum of activities in specialized clinical, microbiological, histological, parasitological and other laboratories. He has professional training, skills and knowledge for independent work in the pre-analytical, analytical and post-analytical phases of the laboratory assays.

The Medical Laboratory Assistant participates in the diagnostic, curative, prophylactic and scientific activities in hospitals and scientific institutes.

In order to achieve the educational and qualification degree “Professional Bachelor”, The Medical Laboratory Assistant has to master a certain knowledge and skills in solid list of Medical, Biochemical, Technical and Social Science and Practices.

The classes are lead in contemporary equipped educational laboratories with independent working places.

The tradition in education of Medical Laboratory Assistants in the Medical College – Sofia and the high level of training allows them for successful professional realization. They are sought and preferred frames for job.

The new graduates start work in some of the most prestigious medical, scientific and industrial clinical, hematological, microbiological, serological, histological, parasitological, genetic and etc. laboratories.



Specialty “X-Ray Technician”

Duration of education: 3 years

Being an X-ray technician is a profession of extremely high expectations for the personal qualities and the professional characteristics of the specialists. The X-ray technicians must be dynamic, versatile, independent and good team players. It no longer applies to simple old X-ray pictures, but includes knowledge of a huge number of methods that are invisible to the human eye (ultra sound, mammography, MRI, CT scan, and etc)

The profession of an X-ray technician has been completely transformed in the past few decades and the old stigmas that it is dangerous have been alleviated by many modern innovations and mechanizations. Being one of the fastest developing areas in health care it is more and more heavily dependent on Information and Communication Technologies which makes it the perfect choice for people who want to combine their love for modern technology and health care. Today most of the diagnostic tasks in front of the Physicians are done by the x-ray technicians. In order to compete them the X-ray technicians must have solid knowledge in physics, anatomy, radiobiology, it is of vital importance to know the diagnostic process and treatment of different illnesses.

Our graduates can start work at:

- X–ray studies and X-ray wards at Diagnostic-consultant Centers, highly specialized hospitals, scientific institutes, dispensaries, sanatoria, resorts, and etc, where could be used: X-ray diagnostic sets for conventional or with the use of a contrast media investigations; DSA sets – for interventional radiology investigations Ultra sound sets; Computer tomography sets; MRI sets; Mammography sets; Sets for post processing or saving images; X-ray sets used by dentists:
- Radiation therapy departments
- Nuclear medicine labs
- Radio-immunology labs
- Highly specialized labs where different methods are combined / EEG, EMG, etc/
- Radiobiology labs or studies where sources of radiation are used for diagnostic or treatment purposes



Specialty “Dental technician”

Duration of education: 3 years

The specialty “dental technician” is a medico-technical specialty that is vital for orthodontic and prosthetic dental medicine. This is a profession for the artist at heart, and for the people that love creating beauty and a wonderful smile in others.

The dental technician is a highly qualified specialist that plans, develops and creates, using the most modern materials and technological methods different kinds tooth prosthetic constructions, face and jaw prosthetics, orthodontic apparatuses and etc., that have been ordered from the dental doctors (dentists).

During their education the students learn many different disciplines that will broaden their horizons and also give them the knowledge and skills to make them extremely competitive after graduation. Some of the students start working even before graduation in dental labs, using the most modern materials, instruments tools available to the profession.

Thanks to the close contacts with the leading dental firms often the medical collage organizes guest lecturers to make presentations of the innovations in the field. Those students that have interest can also do scientific work along with their lecturers.

The graduated dental technicians can work mainly in dental technician labs in Bulgaria and also any where in the world.



Specialty “Physical Therapist”

Duration of education: 3 years

The Physical Therapist takes an active part in providing of medical rehabilitation treatment during all stages of a treatment process.

The Physical Therapist works under prescription of a doctor of physical and rehabilitation medicine. The Physical Therapist develops and provides the rehabilitation program of each patient. The Physical Therapist is a part of a multidisciplinary team with a physician, nurse, social worker, speech therapist, pedagogue, psychologist, occupational therapist.

The Physical Therapist should have a great amount of medical, social and special knowledge of kinesitherapy, massage, electrotherapy, hot- and cold-therapy, hydrotherapy, magnet-, ultra sound-, high-frequency therapy, aerosol therapy, spa therapy, occupational therapy.

The Physical Therapist who is graduated at Medical College has competence to work in both state and private practice at: Specialized and general hospitals; Medical centers; Physical therapy departments; Reflexotherapy and SPA centers; In the field of sport and professional injuries; Social centers and special schools; Resorts, sport clubs; Home therapy.



Specialty “Assistant Pharmacist”

Duration of education: 3 years

The assistant Pharmacist is an assistant to master pharmacists and take active part in the medicines supply and prescription drug production as:

- assist in the creation of pharmaceutical recipes and medicinal sheets;
- assist in the preparation of injectable formulations;
- provides the supply of pharmaceutical and medical-prophylactic institutions with medicines;
- works in section “Drugs without prescriptions” in the reception department of pharmacy;
- participate as an analyst in the analysis of pharmaceuticals;
- are involved in the production of drugs and formulations in pharmaceutical factories. There

is an increased interest in this specialty largely due to the feasibility of development of private business. In cities with a population up to 5000 inhabitants assistant pharmacist has the right to open private pharmacies and to manage it and also to own drugstore and work in it. Certified assistant pharmacists can work in: Pharmacies and hospital pharmacies; Herbal pharmacies; Pharmacy stores; Control and analytical laboratories; Research laboratories; Pharmaceutical factories.



Specialty “Public health inspector ”

Duration of education: 3 years

The greatest leaps in longevity and quality of life are not due to better treatments but because of sanitary conditions and prophylactics. That’s why our motto is: “It is far better to conduct prophylactics of a disease than to treat it”. Public health care needs systemic monitoring of the factors of work, education, living, and surrounding environments in order to determine their effect on the health of the population.

In specialty Inspector of Public Health students conduct the following activities:

- Control of compliance with health requirements for sites of public-purpose products, goods and activities of importance to human health and factors of environment;
- Control of infectious diseases;
- Control on health status of people who have had contact with infected persons, contagious and suspected of suffering from infectious diseases, as well as other persons in epidemic indications;
- Promotion of health and integrated disease prevention;
- Laboratory control of the environment and analyzing and evaluating their impact on public health;
- Monitoring, evaluation and control of noise in urban areas and public buildings, contaminants in food and drinking water;

Our graduates can start work in: Regional Inspection for protection of the environment and water; In departments of hospital hygiene; Occupational Health Services; Border control.



Specialty "Medical Aesthetician" (Medical cosmetics)

Duration of education: 3 years

Medical Cosmetics is a contemporary, modern and attractive specialty. Our motto is "Beauty and health for all". This is the first chance for quality higher education in the aesthetic medical care. In our college the students excel in the field of aesthetic cosmetics and beauty products.

The medical cosmetologist applies cosmetic care by him or her self according to the acquired professional skills and in collaboration with other medical and non medical specialists. They also perform a myriad of tasks in the field of healthcare and cosmetic services

Our graduates can start work in: Cosmetic studios; Beauty centers; Cosmetic medical centers; SPA-centers, fitness clubs, hotels; Dermatology Clinics/Offices; Clinics of Aesthetic Medicine; Make up in theater, cinema, television and others.



Specialty "Massage therapist" with visual impairments

Duration: of education 3 years

This specialty has been created only for persons with visual impairments diagnosed by an official medical commission.

Massage is a part of therapeutically program and also for health promotion.

Massage therapist with visual impairments graduated at Medical College is a medical specialist.

Massage therapist works under prescription of a doctor of physical and rehabilitation medicine and takes part of a multidisciplinary team with a physician, physical therapist, nurse, social worker, pedagogue, psychologist, occupational therapist.

Massage therapist should have high level of communication and professional skills and also great knowledge of massage, kinesitherapy, hot- and cold-therapy and parts of electrotherapy.

Massage therapist has competence to work at: Specialized and general hospitals; Medical centers; physical therapy departments; reflexotherapy and SPA centers; departments of hydrotherapy and sport medicine; resorts, sport clubs; Social centers.



Specialty “Medico-social care”

Duration: of education 3 years

This is the newest specialty in our College.

This is a specialty for people with big hearts who like to help others and will really enjoy seeing the fruits of their work

Our graduates can start work in: Directorates “Social assistance”; Social services institutions; Diagnostic and consultative centers; General and specialized hospitals for active treatment and dispensaries; Hospitals for long term treatment, further treatment and rehabilitation; Hospices; Enterprises and cooperatives of people with disabilities; Enterprise union of the sightless and the union of the deaf; Consulting rooms for medical and social assistance; National and Regional Expert Medical Commissions; Institutions for deprivation of liberty; Homes for children and adolescents; Homes for orphans; Homes for temporary accommodation of children and adults; Nongovernmental organizations.

SUBSIDIARY – VRATSA

Professor Ivan Mitev, MD

*Address: Vratsa – 3000, University Complex
Corpus 1, fl.1 and fl. 2*

Director: Assoc. Prof. Pavlinka Dobrilova

Tel.: +359 92 660 156

+359 92 645176

The subsidiary is founded in 1951 as a school for doctor's assistants. The aim was to assure the needs for medical staff in the central, southern and northwestern parts of Bulgaria. It was a school for doctor's assistants for 10 years and a new specialty was founded – nurse with general qualification in 1961. During the next years a lot of specialties emerged:

- In 1966 – Children's nurse
- In 1974 - Dentist's nurse
- In 1990 – Midwife
- In 2004 – Medical cosmetics

In 1997 by a decree of the Ministry of Councils of the Republic of Bulgaria the school is transferred from the Ministry of Health to the structure of the Medical University – Sofia, where it is as a Medical college until 2009.

On June 2nd 2009 by a decree of the National Assembly the college is reorganized as a Subsidiary-Vratsa of the Medical University – Sofia for students' education in the specialties "nurse" and "midwife" of professional direction "healthcare".

The transition to the Medical University – Sofia requires an academic structure. That is why two Departments are formed:

- Medico-social science
- Healthcare

The education in all theoretical disciplines meets the legal requirements for a subsidiary – over 70% of the lecturers are delivered by PhD or doctor's degree lecturers from the Medical University – Sofia.

The practical training is conducted at the accredited healthcare institutions, social and medico-social institutions as well.

The education in the two specialties – nurse and midwife lasts for 4 years and the students are awarded Bachelor's degree in professional direction healthcare.

Post-graduate specializations are as follows:

- Social activities for nurse – 1 year for students with Bachelor's degree in nursing;
- Breastfeeding, balanced and healthy diet consultant - 1 year for graduated nurses, midwives and doctor's assistants.

All successfully graduated students get a specialty-certificate.

