Syllabus Nursing

Anatomy with physiology

Study programme:	Nursing
Course title:	**Anatomy with physiology**
Course status:	compulsory
ECST Value:	8
Prerequisite:	none

Course goals and objectives:
Acquiring knowledge about the morphology of organs and systems of the human body. Knowledge and understanding of normal anatomical, histological and physiological structures, terms and processes.

Course outcomes:
After completing the course and passing the exam, students are expected to: master the appropriate part of medical nomenclature, be able to explain the structure and functioning of individual organs and organ systems, know and understand the integrated functions of several individual organs, as well as the roles of the body's control mechanisms, know and understand the connection regulatory systems within the human organism, which enables the adaptation of the organism to changes in the internal and external environment in everyday conditions.

Course content:
Lectures

Basic anatomical terms. Regions and parts of the body. Upper extremity. Lower extremity. Bones, joints, muscles, blood vessels and nerves. Chest. Walls, division and contents of the chest cavity. Lungs and lung tissues. Heart. Organs of the mediastinum. Belly. Walls, division and contents of the abdominal cavity. Peritoneum. Peritoneal cavity (liver, stomach, spleen, pancreas, small and large intestine). Retroperitoneal space (kidney, adrenal gland, aorta, inferior vena cava, celiac plexus) Pelvis. Walls and content. Urinary bladder, large intestine, male and female genitals. Pelvic thrusts. Head and neck. Bones of the head and face. Muscles of the head and neck. Large blood vessels and nerves of the head and neck. Central nervous system.
Transport through the cell membrane. Intercellular communication. Physiology of excitation. Resting membrane potential. Action potential. Nerve impulse transmission. Physiology of striated muscles. Neuromuscular synapse. Morphophysiological characteristics of striated musculature. Physiology of smooth muscles. The peculiarity of the structure of smooth muscle tissue, types, innervation, electrical activity of smooth muscles, specificity of contraction. Organization of the central nervous system. Nerve cell. Hemato-encephalic barrier, cerebrospinal fluid, composition and role. Spinal cord. Medulla oblongata Midbrain. Functional characteristics, reticulo-cortical interrelationships, decerebration rigidity and regulation of skeletal muscle tone. Cerebellum, structure, function. Midbrain. Hypothalamus. Vegetative nervous system. Basal ganglia. Cerebral cortex. Senses. Definition, significance and general principles of sensory systems. Sense of hearing and balance. Sense of taste and smell. Eyesight. Pain perception.
Practice
Demonstration of all teaching units on anatomical models. Use of the atlas. Video presentations. Membrane potentials and synaptic transmission. Patellar and pupillary reflex. Influence of various factors on muscle contraction. Concentration of hemoglobin, erythrocytes and leukocytes in human blood. Buffer capacity of plasma. Blood coagulation. Discussion and analysis of selected physiological systems. E-learning.

Literature:
Literature:
1. Netter F. H., Machado, C. A. G.: Atlas of Human Anatomy & CD, ILS, Мала велика књига, Нови Сад, 2005.
2. Scanlon V., Sanders T.: Essentials of Anatomy and Physiology, Kindle Edition, London, 2018

Active teaching hours: 90	
Lectures: 60	Practice: 30

Applicable teaching methods:
Interactive lectures, practice, discussions

Grading Scheme (max. 100 points)

Pre-exam requirements	Points	Final exam	Points
Lectures	5	written exam	60
Practical classes	15		
Colloquim	20		

Basics of Nursing

Study programes: Nursing

Name of subject: **Basics of Nursing**

Subjects status: compulsory

ECTS: 8

Requirement: none

Subjects objective:

Adoption of basic concepts in health care, as well as basic theoretical and practical (dexterity, resourcefulness) professional knowledge in the field of health care and training to apply the acquired knowledge in both professional and research work. Self-education in order to protect oneself, the protection of patients and other team members, the development of critical thinking, the development of independence in the implementation of health care, and the ability to work in a team.

Subjects outcome:

Adopting a holistic approach in health care. Skills. Developing professional awareness, responsibility, humanity, sense of deontology, aesthetics and communication with the patient and professional team. Empowering students to work according to the health care process, mastering independent nursing interventions and interdependent nursing interventions in the field of diagnostics and therapy.

Subjects content:

Lectures

Theoretical considerations of basic and general concepts in medicine. Development of health care. Healthcare and society. Necessary conditions for quality health care in hospital and out-of-hospital conditions. Nursing interventions during patient hospitalization. Healthcare process. Data collection and assessment of user/patient health care needs. General (universal problems) of health care. Health care of specific groups. Healthcare documentation. Models (methods) of the organization of health care provision. Progressive care and patient categorization. Improvement of health care through the research activity of nurses.

Practical Classes

Analysis of the basic values of nursing care and the necessary conditions for quality health care in hospital and non-hospital settings. Basics of good practice and infection control. Nursing interventions during patient hospitalization. Determining needs in health care. Application of tools for collecting subs. Recording of vital signs and other health indicators as a form of observation in health care. Nursing diagnosis and collaborative problem in the health care process. Health care planning. Realization of the health care plan. Practice of certain nursing interventions. Evaluation in the health care process and management of nursing documentation.

Literature:

Literature:

3. Gulanick M., Myers J. L.: Nursing Care Plans-Nursing Diagnoses and Intervention, Elsevier, Mosby, 2007.
4. Potter P. A., Perry A. G., Stockert P. A., Hall A.: Fundamentals of Nursing, textbook, Elsevier, New York, 2020.
5. Lynn P. B.: Taylor's Clinical Nursing Skills, A Nursing Process Approach, textbook, LWW, Liverpool, 2018.

Number of active teaching: 60

Lectures: 30	Exercises: 30

Methods of teaching: interactive lectures, practical teaching, consultations, professional practice

Grading (maximum 100 points)

Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5	written exam	50
Practical classes	25		
Colloquim	10		
Seminar	10		

Hygiene with the basics of microbiology

Study programes: Nursing

Name of subject: **Hygiene with the basics of microbiology**

Subjects status: compulsory

ECTS: 6

Requirement: none

Subjects objective:

Acquiring knowledge about the health education process as a measure of health care at all levels, to learn and disseminate information about all dimensions of health to master the principles, goals, methods and application of health education tools, to develop healthy and change risky behavior of individuals, families and communities through health procedures and communication skills, promotes and improves health, to develop interests in students for their permanent professional and general education. Getting to know the cellular organization and basic characteristics of prokaryotic and eukaryotic microorganisms and viruses. Acquaintance with disease-causing microorganisms, symptoms and treatments of microbiological diseases, epidemiology and methods of prevention

Subjects outcome:

To apply acquired knowledge and skills as a health care worker and professional expert for health promotion and education of individuals, families and communities, to independently and in a health care team carry out health education interventions for promotion, improvement of health and disease prevention. The student will be able to identify etiological agents of infectious diseases, interpret in vitro sensitivity tests of microorganisms to antibiotics and chemotherapeutics, apply the principles of rational antibiotic therapy, chemoprophylaxis and active immunization.

Subjects content:

Lectures

General bacteriology: classification of microorganisms, anatomy and physiology of the bacterial cell, metabolism of bacteria, effect of different agents on microorganisms, pathogenicity and virulence factors, antibiotics, antimycotics and chemotherapeutics, physiological microflora, rapid diagnostic tests and molecular methods in microbiol. diagnostics, General and special virology: general properties of viruses, replication, action of physical and chemical agents on viruses, pathogenesis and control of viral infections, interferons and antiviral drugs, laboratory diagnosis, DNA and RNA viruses important for human pathology: Health education in the system of scientific disciplines , Health-contemporary concept, Health education, Factors affecting health, Lifestyle, Life, health and environment, Health promotion and improvement, Goals and principles, Behavior and behavior changes, Resources and risks, Disease prevention, Education, counseling and information, Planning, implementation and evaluation of health education interventions in primary, secondary, tertiary care institutions and in the community, for all population groups, Methods in health education, Communication, educational and organizational methods and strategies, Seven principles of WHO education, Health education tools - types, application and compliance, Implementation of health education interventions - professional nurse in the health care system.

Practical Classes

Demonstration of all teaching units on video presentations, sterilization and disinfection, isolation and identification of bacteria, enterobacteria, mycoplasma and chlamydia, microbiological testing of drugs, laboratory diagnosis of viral, parasitic and fungal infections. Analysis of cases from practice (choice of the relevant method). Part of the exercises is done in the microbiology laboratory.

Literature:

1. Weston D.: Infection Prevention and Control: Theory and Practice for Healthcare Professionals, John Wiley & Sons, New York, 2008.
2. Andersen B. M.: Prevention and Control of Infections in Hospitals, textbook, Practice and Theory, Springer, Berlin, 2016.
3. Tortora Gerard J., Funke Berdell R., Case Christine L.: Microbiology: An Introduction, textbook, Books a la Carte Edition, Benjamin Cummings, New York, 2009

Number of active teaching: 75

Lectures: 45 | **Exercises:** 30

Methods of teaching:

lectures, exercises, work with models, discussions.			
Grading (maximum 100 points)			
Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5	written exam	60
Practical classes	5		
Colloquim	20		
Seminar	10		

Public Health

Study programes:	Nursing
Name of subject:	**Public Health**
Subjects status:	compulsory
ECTS:	6
Requirement:	none

Subjects objective:

Acquiring knowledge about health value and determinants, the role and tasks of the individual, families, local communities and societies for health preservation, the role of nurse in public health activities. To become familiar with the national health promotion project and national disease prevention programs, as well as European health policy strategies. To learn the principles of healthy and balanced nutrition for healthy and sick people, the functioning of health education and to connect applied theory with practice.

Subjects outcome:

The ability of students to recognize and actively influence factors related to health, to recognize the role of nurse in public health activities and especially in health promotion, to distinguish between health education and health promotion, to practically apply the acquired theoretical knowledge and previous experiences from public health campaigns to solving current problems in practice.

Subjects content:

Lectures

Public health - concept, development and activities, legal regulations. Health promotion, features and activities. Aspects of health for society, health indicators, global health challenges, impacts on individual and population health. Health strategy for all in the 21st century, adopted strategies and national health promotion and disease prevention projects in the RS. Experiences of successful public health campaigns. Innovations in health care, protection of vulnerable categories of the population. Prevention and health education, health education. Forms, methods and areas of work, motivation and communication in health education. The role of nutrition in maintaining health, principles and guidelines for a healthy diet. The place and role of nurse in public health activities, counseling on health preservation and disease prevention, various areas of health promotion, correct application and prevention of side effects of drugs, medical devices, cosmetics and other products, connecting different segments/levels of health care and patient care, environmental protection activities.

Practical Classes

Looking at health challenges in the immediate and global environment. Consideration of different methods/models of public health and health promotion activities. Discussion of famous public health campaigns, using experiences, overcoming problems. Consideration of adopted strategies and national preventive programs and proposing new ones. Proposal, plan and implementation of a public health program with a clearly defined problem, goals and parameters of success. Proposal of activities in various areas of health promotion and disease prevention, in connection with the health system at various levels, environmental protection, with documented results. Using data on the consumption of drugs or other products to define the problem and create a plan of public health activities. Counseling on proper nutrition.

Literature:

Literature:

1. Fleming ML, Parker E, Correa-Velez I. Introduction to Public Health, 4th Edition. Elsevier, 2019.

2. Rees JA, Smith I, Watson J. Pharmaceutical Practice. 5th Ed. Elsevier Edinburgh, UK, 2014.
3. Ross AC, Caballero B, Cousins RJ, Tucker KL, Ziegler TR: Modern Nutrition in health and disease, 11th ed., Lippincott Williams & Wilkins, Baltimore, Philadelphia, USA, 2014.

Number of active teaching: 75			
Lectures: 45	**Exercises:** 30		
Methods of teaching: interactive lectures, case analysis, e-learning			
Grading (maximum 100 points)			
Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5	Written exam	65
Practical classes	20		

Biological materials for Laboratory diagnostics

Study programs: Nursing

Name of subject: **Biological materials for Laboratory diagnostics**

Subjects status: compulsory

ECTS: 11

Requirement: none

Subjects objective:

Acquaintance of students with laboratory tasks in clinical diagnostics, introduction to various biological materials, their extraction, proper transport and storage, examination of laboratory results in clinical practice.

Subjects outcome:

After completing the course, the student will be familiar with the basics of scintigraphy, physical properties of radioactive isotopes, their application in medicine, basic regulations in radiation protection and patient care before and after performing scintigraphic tests.

Subjects content:

Lectures

Concept of laboratory, clinical chemistry, clinical biochemistry, laboratory medicine, laboratory diagnostics, health system. Organization of laboratory service at primary, secondary and tertiary level. Biological materials, their importance and appropriate measures for extraction, transport and storage. Capillary puncture and phlebotomy under standard conditions. Blood sampling procedure. Anticoagulants - various coagulants and other additives for sample preparation. Preanalytical variables - becomes aware of the importance of correct patient preparation and the influence of preanalytical variables on the quality of biological material. Basic laboratory procedures. Definition and structure of drugs, mechanisms of action, labeling and handling of drugs and more important medical forms. Absorption, distribution and elimination of drugs. Pharmacology of the central nervous system, autonomic nervous system, cardiovascular system, pharmacology of infectious diseases, cytostatics, blood pharmacology, respiratory system. Sore throat, cough, allergic rhinitis, elevated body temperature, respiratory infections, stomach problems, constipation, diarrhea. Physical basics of radioactive waste and types of ionizing radiation (alpha, beta and gamma rays). Basic principles of radiopharmacy (labeling of specific pharmacological substances with isotopes and their application to patients). Gamma rays - types of detectors, computer processing of scintigrams. Medical treatment with radiopharmaceuticals. Radiation protection, dosimetry and care of irradiated patients.

Practical classes

Demonstration of all teaching units on video presentations. Analysis of cases from practice (choice of the relevant method). Part of the exercises is done in the laboratory. Determination of urea and creatinine in serum and urine. Chemical examination of urine. Examination of urine sediment. Tests for examination of glomerular and tubular kidney function. Creatinine clearance. Determination of bilirubin and bile acids in serum. Determination of ammonia in blood.

Literature:

Literature:

1. Marshall W.J., Bangert S.K.: Clinical Chemistry, Edinburgh Mosby, Единбург, 2004.
2. Shankara S.: Laboratory Manual for Practical Biochemistry, Jaypee Brothers, New Delhi, 2018.
3. Guder W. G.: Samples from the patients to the laboratory-the impact of preanalytical variables on the quality of laboratory results, GIT Verlag, Darmschtate, 2001.
4. Senger R. S.: Laboratory Manual of Biochemistry: Methods and Techniques, NIPA, London, 2014.

Number of active teaching: 105	
Lectures: 60	**Exercises:** 45

Methods of teaching:

interactive lectures, practical teaching, case analysis

Grading (maximum 100 points)

Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5	Written exam	70
Practical classes	25		

Nutrition and Medical Nutritional Therapy

Study programes:	Nursing
Name of subject:	**Nutrition and Medical Nutritional Therapy**
Subjects status:	compulsory
ECTS:	10
Requirement:	none

Subjects objective:

The course should enable the student to acquire knowledge about the specific nutritional needs of certain age groups, get acquainted with the biological value of certain food substances and plan nutrition in accordance with physiological needs.

Subjects outcome:

After completing the course, the student should be able to: assess the nutritional status of individuals and population groups and define different menus depending on the specifics of the consumption group.

Subjects content:

Lectures

Acquaintance with proper nutrition. Preventive and clinical approach to proper nutrition, getting to know and mastering methods for assessing nutritional status. Measures for evaluation and improvement of nutrition. Health aspects of eating disorders, nutritional deficits and diseases caused by excessive food intake. Nutrition in special conditions. Nutrition and health, meaning of proper nutrition for certain stages of organism development, principles of proper nutrition, standards. Metabolism, needs and biochemical function of nutritional and protective components (proteins, lipids, carbohydrates, minerals, trace elements, vitamins). Diseases of improper nutrition. Principles of proper nutrition and population education. Tears as a cause of disease and a pathological factor. Principles of food safety and quality control. Basics of medical nutritional therapy and patient education. Sanitary control of buildings, employees, foodstuffs and food.

Practical Classes

Principles of social food planning (in crèches and kindergartens, school restaurants, homes for children, student and student dormitories, homes for the elderly, public restaurants). Nutrition in hospitals, rehabilitation institutions, recreation centers, tourist and sports facilities. Principles of proper nutrition and population education. Tears as a cause of disease and a pathological factor. Principles of food safety and quality control. Basics of medical nutritional therapy and patient education. Nutrition of patients in hospital and outpatient conditions and types of diets. Parenteral nutrition. Nutrition of children and youth, pregnant and lactating women and the elderly. Obesity and malnutrition.

Literature:

Literature:

1. Nelms M., Long Roth S.: Medical Nutrition Therapy: A Case Study Approach, 4th Edition, Cengage Learning, Boston, 2013			
Number of active teaching: 105			
Lectures: 60	**Exercises:** 45		
Methods of teaching: interactive lectures, practical teaching, case analysis			
Grading (maximum 100 points)			
Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5	Written exam	50
Practical classes	25		
Colloquium	20		

Basics of Geriatrics

Study programes:	Nursing
Name of subject:	**Basics of Geriatrics**
Subjects status:	compulsory
ECTS:	6
Requirement:	none

Subjects objective:

Acquiring knowledge and skills in the implementation of health care for the elderly, understanding the peculiarities of the elderly in relation to their physical, social and psychological needs and problems, and getting to know the possibilities of their care in institutions and in their own homes.

Subjects outcome:

After completing the course, the student should be able to: recognize the specific problems of the elderly, assess functional abilities and possibilities of self-care, educate for self-care and treatment in homes for the elderly and geriatric hospitals.

Subjects content:

Lectures

The concept of gerontology and geriatrics. Physical, psychological and social aspects of aging. Recognizing the problems of the old. The most common health problems of the elderly, their prevention and treatment. The role of the nurse in health care and care of the elderly. Specifics of care in nursing homes and geriatric centers. Institutions dedicated to the elderly. Development directions of geriatrics in the EU.

Practical classes

Changes in individual body systems and organs caused by aging, basic human needs and aging, assessment of functional abilities and possibilities of self-care, the most common health problems of the elderly, education for self-care and treatment. Visit to the gerontological center.

Literature:

Literature:

1. Boltz. M.: Evidence-Based Geriatric Nursing Protocols for Best Practice, 4th Edtion, Springer Publishing Company, New York, 2012.
2. Halter J. B., Ouslander J. G., Tinetti M., Studenski S., High K. P., Asthana S.: Hazzard's Geriatric Medicine and Gerontology (Principles of Geriatric Medicine & Gerontology), textbook, McGraw-Hill Education, New York, 2009.
3. Taylor R.: Oxford Handbook of Palliative Care, Oxford Press, Oxford, 2009.

Number of active teaching: 75		
Lectures: 45	**Exercises:** 30	

Methods of teaching:

interactive lectures, practical classes

Grading (maximum 100 points)

Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5	Written exam	60
Practical classes	15		
Colloquium	20		

Basics of Rehabilitation

Study programes:	Nursing
Name of subject:	**Basics of Rehabilitation**
Subjects status:	compulsory
ECTS:	4
Requirement:	General Chemistry

Subjects objective:

Adopting the principles, ideas and philosophy of modern rehabilitation of sick and injured persons by applying all the necessary measures and procedures with the aim of maximum possible retraining, return to the living and working environment, resocialization and inclusion in the family and society, through a holistic and individualized approach and interdisciplinary cooperation in the team for rehabilitation.

Subjects outcome:

Adopted principles and philosophy of modern rehabilitation, through a holistic view of psycho-physical-social integrity and individualization in the approach to a sick or injured person and by considering specific needs, determining the application of all necessary measures and procedures for the successful achievement of the goal in the process of their retraining, resocialization and reintegration through inclusion in the family and society by applying possible primary, secondary and tertiary prevention of disability.

Subjects content:

Lectures

Influences of the living and working environment on the psycho-physical-social integrity of a person. Concept, importance and essence of rehabilitation and rehabilitation of sick and injured persons. Disability and disability. Idea, philosophy and development of rehabilitation. Modern concept of rehabilitation. The relationship between medicine and rehabilitation. Division of rehabilitation. Ethics and deontology. Principles of rehabilitation. Contraindications and indications. Holistic approach. Individualization in approach. Multidisciplinary approach. Teamwork. Specifics of disability according to life expectancy - childhood and adolescence, productive age, third age. Physical, psychological and social aspects of disability. Disability and society. Classifications and models: medical, social, inclusive. Physical and social barriers. Discrimination in family and society. Accessibility. Handicap situation. Medical rehabilitation. Methodology-physical medicine in rehabilitation. Helpers. Adaptations and modifications of the living, working and public environment. Education. Reassessment of working capacity. Professional rehabilitation.

Practical Classes

Ethical and deontological principles. Attitude towards the profession, the patient, the PWD. Getting to know the organization of the work of the rehabilitation institution. Preparation for contact with the patient. Insight into medical documentation. Principles of rehabilitation. Holistic approach. Individualization in approach. Professional attitude. Teamwork. Tasks of the occupational therapist in the team. Documentation of the occupational therapist. Acquaintance with the work of other team members. Coordination. Rehabilitation plan and program. Assessment of the handicap situation. Architectural-technical and social barriers. Accessibility. A chain of continuous motion. ASŽ. Adaptations of the living, working and public environment. She helped. Assessment of work ability. Pre-professional rehabilitation. Getting to know PWD associations. Direct contact with PWDs, association members.

Literature:

Literature:

1. Shatzer M.: Physical Medicine and Rehabilitation, textbook, LWW, Liverpool, 2012
2. Weiss L., Lenaburg H., Weiss J.: Physical Medicine and Rehabilitation, textbook, Demos Medical, London, 2017
3. Gonzales E.: Physiological Basis of Rehabilitation Medicine, Butterworth Heinemann, Boston, 2001.

Number of active teaching: 60			
Lectures: 30	**Exercises:** 30		
Methods of teaching: interactive lectures, practical teaching, case analysis, professional practice			
Grading (maximum 100 points)			
Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5	Written exam	40
Practical classes	35		
Colloquium	20		

Basics of Pathophysiology

Study programs:	Nursing
Name of subject:	**Basics of Pathophysiology**
Subjects status:	compulsory
ECTS:	3
Requirement:	Anatomy with Physiology

Subjects objective:
Acquiring knowledge about the mechanisms of tissue and organ cell damage and learning about the morphological changes that underlie diseases. Training for recognizing morphological changes in cells, tissues and organs and getting to know the etiology, pathogenesis and clinical manifestations of the most significant metabolic disorders and functional disorders of organs and organ systems, the causes and mechanisms of malignant cell transformation, as well as the characteristics of tumor growth and the changes it causes in the body.

Subjects outcome:
After completing the course, the student knows basic medical terminology and is able to adequately present medically relevant facts, understands the etiology and pathogenesis of basic metabolic and functional disorders of human organs and organ systems, is able to connect their clinical manifestations with the causes and mechanisms of their occurrence, and has a pathobiological basis for understanding the mechanisms of action of chemical agents and drugs, as well as the diagnostic strategy in case of pathological phenomena.

Subjects content:
Lectures
Adaptation, aging, cell death. Morphological changes of the cell. Etiopathogenesis of acute and chronic inflammation. Malignant cell transformation and growth. Disorders of water and electrolyte circulation. Disorders of acid-base balance. Etiopathogenesis: malnutrition, obesity, diabetes mellitus, atherosclerosis, cardiovascular system function disorders, respiratory system function disorders, kidney function disorders, nervous system function disorders, endocrine gland function disorders and neuroendocrine regulation, digestive system disorders, blood composition and function disorders, function disorders skin.
Practical classes
Cell injury and cell death. Etiopathogenesis of inflammation. Malignant cell transformation and growth. Disturbances in the circulation of water, sodium and potassium. Disorders of calcium, magnesium and phosphate metabolism. Etiopathogenesis of diabetes mellitus, atherosclerosis, acid-base balance. Disorders of the cardiovascular system, respiratory system, kidney function, nerve function, endocrine gland function and neuroendocrine regulation, digestive tract and liver function, blood composition and function.

Literature::

1. Hammer GH, Mc Phee JS. Pathophysiology of disease. An Introduction to Clinical Medicine, 7th ед. Lange Medical Books/McGraw-Hill; 2014.
2. Silbernagl S, Lang F. Color Atlas of Pathophysiology, Thieme; 2016.
3. Huether SE., McCance K L. Understanding Pathophysiology, 6th ед. Elsevier Science; 2016.
4. Porth C. Essentials of Pathophysiology: Concepts of Altered States. Lippincott Williams and Wilkins; 2014

Number of active teaching: 75	
Lectures: 45	**Exercises:** 30

Methods of teaching:
lectures, practical exercises, case analysis

Grading (maximum 100 points)			
Pre-Exam commitments	**Points**	**Final Exam**	**Points**
Lectures	5	written exam	50
Practical classes	15		
Colloquium	30		

Basics of Pharmacotherapy

Study programes:	Nursing
Name of subject:	**Basics of Pharmacotherapy**
Subjects status:	compulsory
ECTS:	6
Requirement:	Anatomy with Physiology

Subjects objective:

To provide the student with: knowledge about the mechanisms of action of drugs, information necessary for understanding the different effects of drugs, understanding the therapeutic and side effects of certain groups of drugs, knowledge about the principles of therapeutic use of drugs.

Subjects outcome:

After completing the course, the student is expected to be able to: identify the mechanisms of different effects of certain groups of drugs, connect the therapeutic and unwanted effects of certain groups of drugs with their different pharmacological effects, build their own critical attitude towards the drug.

Subjects content:

Lectures

Introduction. History of pharmacology. Division of pharmacology. Definition of medicine. General principles and drug development. Distribution of medicines. Method of administration of medicines. Dosage. LADMER (release, absorption, distribution, metabolism and excretion of drugs and the body's response to the administered drug). The effect of drugs on the body. Types and character of drug action. Mechanism of drug action. Factors affecting the effect of drugs. Change in the effect of drugs upon repeated administration. Mutual effects of drugs. Harmful effects of drugs. Addiction to drugs. Basics of clinical pharmacology. Nonsteroidal anti-inflammatory drugs. Antirheumatic drugs that modify the course of rheumatic disease. Blood pharmacology: anticoagulant and coagulant drugs. antiplatelet drugs, local and systemic hemostatics. Antianemic drugs. Water and electrolytes: means to replace lost fluids. Medicines for parenteral nutrition. Pharmacology of the respiratory tract. Pharmacology of the cardiovascular system. Medicines and therapy of peripheral vascular diseases. Antilipemic agents. Pharmacology of the digestive tract. Immunosuppressants and immunostimulants. Pharmacology of vitamins. Medicines for the treatment of obesity. Pharmacology of hormones. Pharmacology of antimicrobial drugs. Antifungal drugs. Antiviral drugs. Amoebicidal drugs. Antimalarial drugs. Antiparasitic drugs. Antiseptics and disinfectants. Chemotherapy of malignant diseases.

Practical Classes

General principles and drug development. Working with pharmacological databases on the Internet. Definition of medicine. Distribution of medicines.

Literature:

1. Katzung B. G., Basic&Clinical Pharmacology, Lange Medical Books, The McGraw-Hill Companies Inc, 9th ed., Singapore, 2003.
2. Rang H. P., Dale M. M., Ritter J. M., Moore P. K.: Фармакологија, V изд., Дата Статус, Београд, 2004

Number of active teaching: 75	
Lectures: 45	**Exercises:** 30

Methods of teaching:

lectures, practical classes, case analysis

Grading (maximum 100 points)			
Pre-Exam commitments	Points	**Final Exam**	Points

Lectures	5	Written exam	60
Practical classes	15		
Colloquim	20		

Nursing in Psychiatry

Study programes: Nursing

Name of subject: **Nursing in Psychiatry**

Subjects status: compulsory

ECTS: 9

Requirement: none

Subject objective:

Acquiring knowledge about the effects of occupational occupational therapy on psychological functions and mastering the skills of communication, assessment, selection and application of occupational occupational therapy methods and organizing work in large and small groups of psychiatric patients.

Subject outcome:

The student is able to assess the patient from the aspect of occupational therapy, determine therapeutic goals in relation to the disorder of psychological functions, motivate an individual and/or group, organize individual and group work, sports and recreational activities, choose, apply and dose occupational-work therapy procedures and methods and reevaluates the effects of his work.

Subjects content:

Lectures

Diagnostics of mental disorders. Dynamic psychiatry. Schizophrenia. Mood disorders. Psychoses of insanity. Anxiety disorders. Psychophysiological disorders. Personality disorders. MOPS. Addictions. Child psychiatry. Psychopathological reactions to stressful situations. Emergencies in psychiatry. Liezon consultative psychiatry. Forensic psychiatry. Therapy in psychiatry - biological therapy. Therapy in psychiatry - psychotherapy. Therapy in psychiatry - occupational and work therapy. Application of occupational therapy in certain psychiatric entities.

Practical Classes

Conducting a functional examination and assessment of the patient's functional status, which includes establishing contact, observation, interview, assessment of psychological functions, movement coordination test, collection of additional data about the patient and his condition. Use of medical records. Keeping documentation of the occupational therapist. Development of a detailed treatment plan with therapeutic goals in occupational occupational therapy in accordance with the conclusions and recommendations of the psychiatric team. Introducing the patient to the work plan in occupational therapy. Motivating the patient to perform techniques and activities in occupational therapy. Selection of activities or techniques in occupational occupational therapy in accordance with the therapeutic goal, diagnosis, stage of the disease, gender, age and contraindications. Individual approach - application of a selected technique of occupational occupational therapy in work with a specific patient (dosage, adjustment or change of technique). Functional occupational therapy in psychiatry (occupational occupational therapy and its effect on psychomotor activities, emotions, volitional activities, integrative functions of consciousness, inhibition of pathological impulses and states, psychosocial activities...). Organizing group activities in occupational therapy (morning meetings, therapeutic community, quiz, poetry reading). Organization of sports and recreational activities in occupational therapy (chess, dominoes, various sports competitions, morning gymnastics...). Education of patients and their families in structuring activities of daily life and free time. Group work techniques that encourage patient communication and make it easier for them to fit into the wider social environment. Evaluation of the effects of occupational therapy during treatment.

Literature:

1. Crouch R., Alers V.: Occupational Therapy in Psychiatry and Mental Health, Wiley-Blackwell, New Jersey, 2005.
2. Sadock B., Sadock V. A., Ruiz P.: Kaplan & Sadock's Concise Textbook of Clinical Psychiatry, textbook, LWW, Liverpool, 2015.
3. Halter M. J.: Varcarolis' Foundations of Psychiatric-Mental Health Nursing: A Clinical Approach, textbook, Saunders, New York, 2017

Number of active teaching: 60			
Lectures: 45	**Exercises:** 15		
Methods of teaching: lectures, practical teaching, case analysis, professional practice			
Grading (maximum 100 points)			
Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5	Written exam	60
Practical classes	15		
Colloquim	20		

Basics of Internal Medicine with Internal Medicine Patients Nursing

Study programes:	Nursing
Name of subject:	**Basics of Internal Medicine with Internal Medicine Patients Nursing**
Subjects status:	compulsory
ECTS:	9
Requirement:	none

Subjects objective:

Acquisition of current theoretical and practical professional knowledge in internal medicine and internal patient care and training to apply acquired knowledge in professional and research work

Subjects outcome:

After completing the course, students will be trained for individual and team work in recognizing cardiology, pulmonology, nephrology, endocrinology, gastroenterology, hematology and oncology diseases.

Subjects content:

Lectures

Cardiology. Specifics of health care at the department of rhythm disorders, pacemaker implantation and electrophysiology. Diagnosis, therapy and prevention of arterial hypertension. Specificities of health care in cardiology departments. Prevention, diagnosis and treatment of coronary disease risk factors. Diagnosis and treatment of acute coronary syndrome. The most common and important pulmonary diseases, diagnosis, prevention and treatment. Specifics of health care in pulmonology departments. The most common and important internal oncological diseases, diagnosis, prevention and treatment. Specifics of application of cytostatic and chemotherapy in internal medicine patients. The most common and important hematological diseases, diagnosis, prevention and treatment. The most common and important hematological diseases, diagnosis, prevention and treatment. Specificities of health care in hematology departments. Care and treatment of patients with hemorrhagic syndrome. Care and treatment of immunocompromised patients. The most common and significant gastrointestinal and biliopancreatic diseases, diagnosis, prevention and treatment. The most common and significant liver diseases. Specificities of health care in gastroenterology departments. Preparation of patients for endoscopic diagnostic procedures. Endocrinology. The most common and important endocrinological diseases, diagnosis, prevention and treatment. Specificities of health care in endocrinology departments. Regimes of insulin therapy. Diabetic foot care. The most common and important nephrological diseases, diagnosis, prevention and treatment. The most common and important immunological diseases, diagnosis, prevention and treatment. Specificities of health care in nephrology and immunology departments. Specifics of health care in dialysis units. Performing peritoneal dialysis.

Practical Classes

Etiology and pathogenesis of cardiovascular diseases. Specificities of health care in cardiology departments. Prevention, diagnosis and treatment of coronary disease risk factors. Diagnosis and treatment of acute coronary syndrome. Etiology and pathogenesis of lung diseases. Functional and general symptomatology of respiratory diseases. Diagnostics of diseases of the respiratory organs. Anamnesis, physical examination, abdominal inspection, supplementary examinations of the digestive organs. Etiology and pathogenesis of diseases of the digestive organs. Functional and general symptoms of the digestive system. Functional and general symptoms of diseases of the liver, gall bladder and pathways and pancreas. Specificities of health care in gastroenterology

departments. Preparation of patients for endoscopic diagnostic procedures. Examination and clinical examination of a kidney patient. Specificities of health care in nephrology and immunology departments. Specifics of health care in dialysis units. Implementation of hemodialysis and peritoneal dialysis. Propedeutics of diseases of the blood and blood-forming organs. Specificities of health care in hematology departments. Care and treatment of patients with hemorrhagic syndrome. Care and treatment of immunocompromised patients. The most common and important endocrinological diseases, their diagnosis, prevention and treatment. Specificities of health care in endocrinology departments. Regimes of insulin therapy. Specifics of health care for diseases of the locomotor system.

Literature:

1. Kasper D., Fauci A., Hauser S., Longo D.: Harrison's Principles of Internal Medicine, 19th Edition, McGraw-Hill Professional, New York, 2015.
2. Farr C. B.: Internal Medicine for Nurses: Outlines of Internal Medicine for the Use of Nurses, Scholar's Choice, London, 2015.

Number of active teaching: 90	
Lectures: 45	**Exercises:** 45

Methods of teaching:

interactive lectures, practical teaching, discussions, case analysis, professional practice

Grading (maximum 100 points)

Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5	Written exam	50
Practical classes	25		
Colloquim	20		

Nursing in Neurology

Study programs:	Nursing
Name of subject:	**Nursing in Neurology**
Subjects status:	compulsory
ECTS:	8
Requirement:	none

Subjects objective:

Recognizing neurological symptoms and mastering skills in the work of training patients with diseases and injuries of the central and/or peripheral nervous system.

Subjects outcome:

The student is able to recognize neurological symptoms in injuries and diseases of the nervous system, perform a functional assessment, identify the needs of the patient, determine the goals and tasks of training, manage the course of training, monitor and control the results and maintain appropriate medical documentation for patients with neurological diseases, disorders and impairments and in all stages of the retraining process.

Content of the course:

Lectures

Nursing in the rehabilitation of neurological patients. Principles, goals and objectives of health care in the process of rehabilitation of persons with diseases and injuries of the peripheral motor neuron, central motor neuron, extrapyramidal system. Possibilities of primary, secondary and tertiary prevention of disability. Teamwork. Contraindications. Functional assessment through a holistic approach. Individualization in approach. Plan and program. Choice of activities. Activities of daily living. Selection of aids, modification, production, education. Assessment of the living, working and public environment. Tips for adaptations and modifications. Education of persons with disabilities, family members, society. Assessment of work ability. Collaboration with team members. Terminology. Management of therapeutic documentation.

Practical classes

Acquaintance of the student with the space, means of work, equipment, organization of work, documentation, position of occupational therapist in the department for rehabilitation of neurological patients. Observation of various neurological symptoms in patients with injuries to the peripheral nerves of the extremities, diseases of the peripheral nerves (polyneuropathy, polyradiculoneuritis, poliomyelitis), hemiplegia, spinal lesion, CNS diseases (multiple

sclerosis, Parkinson's disease). Practicing assessment of functional status and determination of patient needs depending on the phase and stage of the pathological condition, determination of goals and objectives, monitoring of training, management and use of medical documentation, creation of necessary temporary and/or functional aids or adaptation of standard ones.

Literature:
Kearney P., McGowan T., Anderson J., Strosahl D.: The Role of the Occupational Therapist on the Neuro-Rehabilitation Team, Springer Publishing Company, New York, 2007.

Number of active teaching: 90

Lectures: 60 **Exercises:** 30

Methods of teaching:
lectures, practical teaching, professional practice

Grading (maximum 100 points)

Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5	Written exam	50
Practical classes	25		
Colloquim	20		

Electronic Data Processing

Study programme: Nursing

Course title: **Electronic data processing**

Course status: compulsory

ECTS credits: 2

Prerequisite: none

Subject objectiv:
To enable students to evaluate their own and others' work by applying statistical-analytical procedures, to design simple researches in order to improve the quality of their work, critical reading of professional literature so that they can understand the procedures and methods of medicine based on scientific knowledge in healthcare.

Subject outcome:
Adoption of basic techniques and methods of health statistics, indicators of vital and demographic statistics. Use of statistical techniques, their interpretation, application of statistical-analytical procedures and presentation of results in professional literature.

Course content:
Lectures:
Concept and definition of statistics. Statistical method and methodology. Basic statistical terms. Methods of data collection. Control and grouping of collected data. Analysis and presentation of data, tables. Graphic display. Absolute and relative numbers. Mean values. Measures of variability. Sample and standard error. Trend. Correlations. Significance tests - X2 test. Significance tests - T test. Methodology for studying the health status of the population. Indicators of the health status of the population. Number and structure of the population. Positive natural population movement. Natural increase and vital index. Negative natural population movement, life expectancy. Mechanical population movement. Morbidity indicators. Organization and work of the health service. Presentation of the vital demographic situation, organization and use of the health service.
Practical Classes

Registration. A survey. Graphical presentation and tabulation. Analysis. Absolute and relative numbers. Mean values. Measures of variability. Sample and standard error. Correlation. T-test. X2-test. Indicators of gender and age structure of the population. Birth, fertility, reproduction. Mortality indicators. Natural increase and vital index. Morbidity indicators.

Literature:
1. Sheskin D. J.: Handbook of Parametric and Nonparametric Statistical Procedures Chapman & Hall/CRC, Washington, D.C., 2000.

Number of active teaching: 30

Lectures: 15 **Exercises:** 15

Applicable teaching methods:

Interactive lectures, practice, discussions			
Grading scheme (maximum 100 points)			
Pre-exam requirements	**Points**	**Final exam**	**Points**
Lectures	5	Written exam	70
Practical classes	25		

Nursing in Gynecology and Obstetrics

Study programs:	Nursing
Name of subject:	**Nursing in Gynecology and Obstetrics**
Subjects status:	compulsory
ECTS:	11
Requirement:	none

Subjects objective:
To enable the student to use the acquired knowledge in the education of the population with the aim of improving and preserving reproductive health, in monitoring the state of health, participating in diagnostic and therapeutic procedures, and planning and implementing women's health care.

Subjects outcome:
Upon completion of the course, the student will be able to recognize the pathologies of early and late pregnancy, provide health care for a premature child, apply the procedure of transferring a premature child, participate in diagnostic and therapeutic interventions.

Subjects content:
Lectures
The most common and significant diseases of women, their diagnosis, prevention and treatment. Therapeutic diagnosis in gynecology. Physical, psychological and social aspects of pregnancy, education and care of pregnant women, mothers in labor and nursing mothers. Therapeutic diagnosis in obstetrics. Physical, psychological and social aspects of marital sterility and menopause, importance of education and care. Specificities of health care in gynecology and obstetrics and their co-specialist branches. Anatomy and physiology of the reproductive system, inflammatory changes of the genital system, benign, malignant changes of the genital system, gynecological urology, sterility, family planning, physiology of pregnancy, pathology of early and late pregnancy, normal childbirth, pathology of childbirth, methods of fetal monitoring, physiology of lactation.
Practical classes
It includes hands-on experience with a special focus on physiological pregnancy, childbirth and the postnatal period as a healthy state. Practical teaching is focused on the assessment of risk factors that are responsible for the occurrence of pathological conditions in the antenatal, intrapartum and postpartum period, on the assessment of emergency conditions in obstetrics, and on health care during and after operative delivery. Describes newborn health care with an emphasis on healthy parenting, assessment of infant body systems, assessment of primitive reflexes, and parent education. The content of the lessons is focused on the provision of health care for prematurely born children as well as their transfer.

Literature:

1. Stephenson R., O'Connor L. J.: Obstetric and Gynecologic Care in Physical Therapy, Second Edition, Academic Press, London, 2000.
2. Banasree B.: Gynecology for Nurses, textbook, Jaypee Brothers Medical Publishers, New Jersy, 2014.
3. Hoffman B., Schorge J., Bradshaw K., Halvorson L., Schaffer J., Corton M.: Williams Gynecology, textbook, Mc-Graw-Hill Education, 2016

Number of active teaching: 90	
Lectures: 45	**Exercises:** 45

Methods of teaching:
interactive lectures, practical teaching, discussions, professional practice

Grading (maximum 100 points)			
Pre-Exam commitments	**Points**	**Final Exam**	**Points**
Lectures	5	Written exam	60
Practical classes	15		
Colloquim	20		

Patronage Nursing and Home Care

Study programes:	Nursing
Name of subject:	**Patronage Nursing and Home Care**
Subjects status:	compulsory
ECTS:	6
Requirement:	none

Subjects objective:

Training students for the organization and implementation of nursing interventions within the framework of health care at home for old, infirm and sick people, cooperation and participation in the health team in accordance with modern principles of health care.

Subjects outcome:

Students will be trained to carry out nursing interventions within the framework of health care at home, including determining needs, assessing the physical and psychological state of the elderly and implementing special care in home conditions.

Subjects content:

Lectures

The content of the subject enables a more comprehensive overview of the needs for the realization of health care in home conditions for sick or injured elderly people, as well as rehabilitation procedures in home conditions. Education of families, volunteers and other persons involved in the care and treatment of patients. Assessment of physical and psychological condition, implementation of nursing interventions according to the requirements of the appropriate level of care.

Practical Classes

Recognition and importance of assessing the problems and needs of the elderly. Geriatric assessment of functional status. Monitoring of health status (observation, measurement of vital parameters), assistance in maintaining personal hygiene, when moving, education of family members and interested volunteers for assistance in caring for the elderly. Prevention of complications during diagnostic and therapeutic procedures. Nursing interventions in outpatient care and home treatment. Preparing students for home treatment and care. Organization of polyvalent patrol service. Preparation of students for the patron visit (documentation, work equipment). Realization of patronage visits.

Literature:

1. Harris M.: Home Health Care, Jones & Bartlett Learning, Massachusetts, 2009.
2. McEvan M.: Health Visiting, McHill Publishing, New York, 2002.

Number of active teaching: 75	
Lectures: 45	**Exercises:** 30

Methods of teaching: lectures, practical teaching, professional practice

Grading (maximum 100 points)

Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5	Written exam	70
Practical classes	25		

Quality supervision

Study programes:	Nursing
Name of subject:	**Quality supervision**
Subjects status:	compulsory
ECTS:	6
Requirement:	none
Subjects objective:	

Familiarizing students with the basics of the theory and quality system in general, as well as product quality, and to provide students with knowledge about the goals, organization, implementation and effects of the quality system, as well as methods that are applied in order to improve its application in the quality system.

Subjects outcome:

After successfully mastering the course, students will be able to be active, equal and successful members of different teams in their organizations, as well as important and effective support to management, understand the functioning of the quality system, develop the ability to communicate with experts from other fields, properly analyze and interpret available information, provide adequate recommendations for the application of appropriate methods in order to increase the efficiency of the management system.

Subjects content:

Lectures

Basic concepts and definition of quality, Quality system, Quality management system and standardization, Quality management system design, Quality economy, Competition with quality, Management and competitiveness, Change management in the function of quality, Quality and changes, Quality production planning, Process control, Motivation for quality , Quality assurance, Quality data systems, Transferring quality control to management.

Practical classes

What is quality? Systems and management. Modern product quality management and innovations in quality system management. Design methods and processes in the quality management system. Quality and the basic business mission. Product design, knowledge of quality on the market. Benchmarking, total quality management and reengineering. Institutionalism as an ambient assumption of possible changes. Quality and changes in the company. Quality aspects of production planning. Control capabilities, taking regulatory action. The effect of multiple standards, the behavior of management bodies towards quality. Assessment of the quality of the outgoing product, control subjects for executive reports on quality. Principles of the plan , the importance of accurate quality reports, the creation and content of the quality rulebook. the management of tasks and the introduction of changes.

Literature:

1. Michell V., Rosenorn-Lanng D. J., Gulliver S. R., Currie W.: Handbook of Research on Patient Safety and Quality Care through Health Informatics, Academic Press, London, 2013.

Number of active teaching: 75	
Lectures: 45	**Exercises:** 30

Methods of teaching:

lectures, practical classes, case analysis

Grading (maximum 100 points)

Pre-Exam commitments	Points	Final Exam	Points
Lectures	5	Written exam	70
Practical classes	25		

Basics of Surgery with Surgical Patients Nursing

Study programes:	Nursing
Name of subject:	**Basics of Surgery with Surgical Patients Nursing**
Subjects status:	compulsory
ECTS:	6
Requirement:	none

Subjects objective:

Mastering theoretical knowledge and skills in patient care of all surgical branches.

Subjects outcome:

Students will be able to practically apply the acquired knowledge from all surgical disciplines necessary for learning skills in the care of surgical patients from the nursing aspect.

Subjects content:

Lectures

Principles of asepsis and antisepsis. Treatment of diseases of the organs of the digestive and endocrine system. Therapy of injuries to organs of the digestive and endocrine system. Therapy of diseases of the locomotor apparatus. Therapy

of locomotor apparatus injuries. Therapy of diseases and injuries of blood and lymphatic vessels. Therapy of diseases and injuries of the central and peripheral nervous system. Treatment of skin diseases and injuries, principles of reconstructive and aesthetic surgery. Treatment of diseases and injuries of the genitourinary tract. Treatment of diseases and injuries of the chest and lungs. Treatment of heart diseases and injuries, extracorporeal blood flow. Etiopathogenesis, classification and determination of stage of malignant diseases, possibilities, principles and modalities of treatment in oncological surgery, principles of prevention of malignant diseases. Specifics of surgery of the developmental age, symptomatology and diagnosis of diseases and injuries in the period of childhood. Definition, types and methods of organ and tissue transplantation, transplantation from living donors, organization and medicolegal aspects of organ transplantation. Specifics of care in organ transplantation. Concept of anesthesia and resuscitation, preparation of the patient for operative treatment, types of anesthesia and monitoring of the surgical patient, procedure with the patient in the postoperative course.

Practical Classes

Application of the principles of asepsis and antisepsis in everyday surgical practice. Specifics of care for patients with digestive and endocrine system injuries. Specifics of care for patients with locomotor system diseases. Specifics of care of patients with surgical diseases and injuries of blood and lymphatic vessels. Specifics of care for patients with surgical diseases and injuries of the central and peripheral nervous system. Specifics of care for patients with burns. Specifics of care for patients with surgical diseases and injuries of the genitourinary tract. Specifics of care for patients with surgical diseases and injuries of the chest and lungs. Specifics of care for patients with surgical diseases and heart injuries. Specifics of care for patients with malignant diseases. Specifics of child care as a surgical patient. Specifics of patient care after organ transplantation. Specifics of semi-intensive and intensive care of surgical patients.

Literature:

1. Pudner R.: Nursing the Surgical Patient, Elsevier, 2005.
2. Norton J., Barie P.S., Bollinger R.R., Chang A.E., Lowry S., Mulvihill S.J., Pass H.I., Thompson R.W.: Surgery: Basic Science and Clinical Evidence, Springer Publishing Company, New York, 2008.

Number of active teaching: 105	
Lectures: 60	**Exercises:** 45

Methods of teaching:

lectures, practical teaching, professional practice

Grading (maximum 100 points)

Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5	Written exam	60
Practical classes	10		
Colloquium	25		

Nursing in Pediatrics

Study programes:	Nursing
Name of subject:	**Nursing in Pediatrics**
Subjects status:	compulsory
ECTS:	6
Requirement:	none

Subjects objective:

To acquaint students with medically healthy and sick children and with the process of pediatric treatment. Get to know the role of the therapist in pediatrics. Analysis of studies and planning of needs in pediatric patient care for individuals and groups. Understand the importance of involving parents in child care. Improving the ability to successfully communicate with therapeutic children, parents and members of the health care team. Motivate students to seek creative solutions to nursing problems in the nursing process.

Subjects outcome:

After completing the course, students will improve therapeutic communication. It will develop knowledge and understanding of nursing intervention in the field of pediatric health care. Understanding ethical principles, health care of parents. Ability to recognize emergency situations and possible complications of children in life-threatening conditions. Unapedi critical analysis of the literature for the development of a seminar paper and an individual case study of a patient.

Subjects content:

Lectures

Involvement of parents in the health care of children and young people. Evidence-based pediatric health care. Application of care processes to individual daily basic activities - a conceptual model by W. Henderson. Caring for a healthy child of all ages. Care of premature children. Care of a sick child. Health care of a child with special needs. Health care of children suffering from pain. Nutrition of the newborn. Neonatology. Genetics. Growth and development of children. Nutrition of children. Nephrology and endocrinology. Cardiology. Pulmonology and dermatology. Emergency medicine. Psychiatry and neurology. Social pediatrics. Poisoning and injuries. Disproportion of physical and mental maturity. Adolescent medicine.

Practical classes

Pediatric health care and application of the theoretical model. Preparation of students for clinical education within the seminar. Practical application of pediatric care interventions in the laboratory within the conceptual model.

Literature:

1. Ball J.W.: Pediatric Nursing, Pearson education/Prentice Hall, New Jersey, 2008.
2. Glasper E.A., Ireland L.: Evidence-based child health care, Challenges fo York, Palgrave, 2000.
3. Goldbloom R.: Pediatric Clinical Skills, Saunders, Philadelphia, 2003.
4. Hockenberry M.: Wong' s Essentials of Pediatric Nursing, Elsevier Mosby, St. Louis, 2007.
5. Muscari M.E.: Pediatrics nursing, Lippincott Williams & Wilkins, Philadelphia, 2005.
6. Potts N.L.: Pediatric Nursing, Thomson, New York, 2007.

Number of active teaching: 120	
Lectures: 60	**Exercises:** 60

Methods of teaching:

lectures, practical teaching, professional practice

Grading (maximum 100 points)

Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5		60
Practical classes	10		
Colloquium	25		

Professional Internship

Study programme: Nursing

Name of subject: **Professional Internship**

Subject status: compulsory

ECTS: 10

Requirement: Passed all compulsory subjects

Subjects objective:

During the tenth semester, a student who has completed and practiced all the required subjects, should be able to prepare for independent professional work. During the internship, the student learns to apply and develop the knowledge and skills acquired during the study, builds a personal professional attitude, behavior and responsibility towards the profession and service users.

Subjects outcome:

Professional internship is part of the study program and takes place in health institutions with which the Faculty has signed Business and Technical Cooperation Agreements: clinical centers, hospitals, special hospitals, health centers and other health institutions of importance for physiotherapy. During professional practice, the student applies the knowledge and skills acquired during five semesters of theoretical and practical classes:

- collection and critical evaluation of patient information based on medical records
- assessment of the condition and definition of medical problems and requests of patients
- critical assessment of problems, selection and implementation of the optimal therapeutic protocol from the fields of orthopedics, surgery, internal medicine, psychiatry, neurology, rheumatology and other branches of medicine
- efficient and safe use of physiotherapeutic tools and equipment
- support for patients with reduced physical or mental abilities for independent inclusion in real life processes,
- use of professional literature and information systems,
- review of the safety, efficiency and economy of physiotherapy protocols
- professional relationship in communication with patients, other healthcare professionals and the general public
- respect for ethical principles in professional work.

Subjects content:

Professional practice in the study program includes a total of 600 hours. The content of professional practice is coordinated with theoretical teaching and implies the application of acquired theoretical knowledge in everyday practice. As part of professional practice, students will upgrade their theoretical knowledge by acquiring practical skills. Students will acquire practical knowledge of physiotherapeutic procedures and techniques of their application in various branches of medicine including orthopedics, surgery, internal medicine, psychiatry, neurology, rheumatology and others.

The faculty sends to the institution, i.e. professional practice mentor who accompanies the student to the professional practice. The mentor is obliged to keep the student's diary during the professional practice, and based on the work diary and practical work, the student is assigned a final grade. The control and supervision of professional practice in front of the Faculty is carried out by a teacher appointed as the coordinator of professional practice.

Number of active teaching: 600

Methods of teaching:

The student performs professional internship under the supervision of a mentor with at least 5 years of experience in providing health care in a health institution. Professional internship involves involvement in the work process with continuous communication and consultation with a mentor. During professional internship, the mentor is obliged to keep a Student's Diary on professional internship. The execution of all the activities that are foreseen within the Professional internship course is confirmed by the mentor with his signature, and the institution where the professional practice is carried out certifies it with a seal. The diary must contain: name, surname and index number of the student, study program, place and time of professional internship, number of hours of professional internship, name of the mentor, date of participation in the professional internship with a brief description of the activities, mentor's grades for all professional practice activities, signatures of the student and mentor with date.

Grading (maximum 100 points)

By certifying the Student Diary on professional practice by the mentor, it is confirmed that the student has successfully completed the professional practice. In Diary, the mentor evaluates the student's work with a grade of 5-10, with a grade of 5 meaning that the student did not meet the required minimum, and a grade of 6-10 that it did, with a minimum score of 51 out of a total of 100.

Thesis

Study programme: Nursing	
Name of subject:	**Thesis**
Subject status:	compulsory
ECTS:	**5**
Requirement:	Passed all subjects
Course objective	

The student is trained to apply basic, theoretical and methodological, scientific-professional and professional-applicative knowledge and methods for solving specific problems within the chosen topic of the final paper. As part of the final paper, the student, studying the available literature, studies the problem, its structure and complexity and, based on the conducted analyses, draws conclusions about possible ways to solve it. Also, the student is trained to write the final paper, present it within the given deadline and discuss the work with experts.

Course outcome

Based on the knowledge and skills acquired during studies, the student is able to collect, critically analyze and evaluate the medical documentation of patients, to determine therapeutic goals and to choose the optimal methods for achieving the goals. The student, on a specific example of the topic of the diploma thesis, demonstrates the ability and acquired competences for defining and clinically considering problems, planning and implementing the procedure, all with the aim of improving the health of patients.

Course content

The final work represents the student's research work in which, by selecting and applying the appropriate research methodology, he approaches the solution of practical questions and tasks in the field of nursing. After the research, the student prepares the final thesis in the form containing the following chapters: Introduction, Theoretical part, Experimental part (if the work was done experimentally), Results and discussion, Conclusion, Literature review. The thesis defense consists of an oral presentation of the work by the student, asking questions by committee members and the student's answers to the questions.

Number of active teaching: 150

Methods of teaching:

During the preparation of the final paper, the mentor gives the necessary instructions to the student, refers him to certain literature, helps with the selection of research methods, analysis and processing of the obtained results, drawing correct conclusions, etc. Within this part of the final paper, the student performs additional consultations with the mentor and, if necessary, with other teachers who deal with issues related to the topic of the final paper.

Grading (maximum 100 points)

The grade on the final thesis is the sum of points obtained for: experimentally done work (if the work is experimental) 30 points, written work 30 points, presentation of the work 20 points and answers to questions related to the topic before the committee 20 points.

Elective courses

English language

Study programes:	Nursing
Name of subject:	**English language**
Subjects status:	elective
ECTS:	5
Requirement:	none

Subjects objective:

The goal of the course is mastering the peculiarities of the English language, learning phrases and patterns necessary for communication at a professional level and mastering the techniques of written and oral expression in professional communication.

Subjects outcome:

The student will be able to apply the acquired knowledge for the purpose of professional communication, create appropriate written forms in accordance with his professional communication and use speech patterns adapted to the situation.

Subjects content:

Lectures

English alphabet, basic rules of reading and writing, greeting, personal pronouns, possessive pronouns, present tense, gender and number of nouns, numbers, colors, interrogative and declarative sentences. Aspects of everyday life in English-speaking countries. Prepositions with dative and accusative, imperative, modal verbs, perfect, sentence frame. Aspects of everyday life in English-speaking countries.

Practical Classes

Students practice dialogues related to everyday situations (giving/understanding instructions for navigating the city, recounting events, making travel plans, scheduling a doctor's appointment and describing ailments...), understanding everyday texts (such as advertisements), expanding their vocabulary related to the immediate environment, family, workplace.

Literature:

1. McCarter S.: Oxford English for careers: Medicine 1, Oxford University Press, 2013.
2. Мићић С.: Медицински речник, Београд, Завод за издавање уџбеника, 2011.
3. Pohl A.: Testing Your Professional English: Medical, Essex, Pearson Education Limited, 2007.
4. Vince M.: Advaned Language Practice, Oxford, Macmillian Publishers Limited, 2003.
5. Crowther J et al.: Oxford Advanced Learner's Dictionary, Oxford University Press, 1995.

Number of active teaching: 60	
Lectures: 30	**Exercises:** 30

Methods of teaching:

interactive teaching, discussions

Grading (maximum 100 points)

Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5	Written exam	60
Practical classes	25	Oral Exam	10

German language

Study programme: Nursing	
Course title:	**German language**
Course status:	elective
ECTS credits:	5
Requirement:	none

Course goals and objectives

The goal of the course is mastering the peculiarities of the German language, learning phrases and patterns necessary for communication at a professional level and mastering the techniques of written and oral expression in professional communication.

Course outcome

The student will be able to apply the acquired knowledge for the purpose of professional communication, create appropriate written forms in accordance with his/her professional communication and use speech patterns adapted to the situation.

Course content

Theory

German alphabet, basic rules of reading and writing, greeting, personal pronouns, possessive pronouns, present tense, gender and number of nouns, numbers, colors, interrogative and declarative sentences. Aspects of everyday life in German-speaking countries. Prepositions with dative and accusative, imperative, modal verbs, perfect, sentence frame. Aspects of everyday life in German-speaking countries.

Practice

Students practice dialogues related to everyday situations (giving/understanding instructions for navigating the city, recounting events, making travel plans, scheduling a doctor's appointment and describing ailments...), understanding everyday texts (such as advertisements), expanding their vocabulary related to the immediate environment, family, workplace.

Literature

1. Lemcke C., Rohrmann L., Scherling T.: Berliner Platz 1 NEU, Klett-Langenscheidt, Minhen, 2013.
2. Ђукановић Ј., Жилетић З.: Граматика немачког језика за средње школе, Завод за уџбенике и наставна средства, Београд, 1991.

Number of active teaching: 60	
Lectures: 30	**Exercises:** 30

Applicable teaching methods

interactive classes, discussions

Grading (maximum 100 points)

Pre-exam requirements	points	**Final exam**	points
Lectures	5	Written exam	60
Practical classes	25	Oral exam	10

First Aid

Study programs: Nursing

Name of subject: First Aid

Subjects status: elective

ECTS: 3

Requirement: none

Subjects objective:

Introducing students to principles of initial help to suddenly injured or diseased patients. Acquisition of basic knowledge and skills in the field of first aid, basic measures of resuscitation and the basics of assessment of life threatening patients and first aid in case of injuries and other emergencies. Learning skills for immediate management of the injured, protecting their life as well as the life of a helper and the environment.

Subjects outcome:

Student: Acquires the skills of examining and recognizing signs and symptoms that require prompt and immediate reaction; Acquires knowledge about safe handling of defibrillators and recognition of life-threatening conditions; Acquires the skills to perform a "rapid trauma examination"; Introduced to the conditions in which first aid can be useful.

Subjects content:

Lectures

Definition and significance of first aid. Cardiorespiratory arrest and resuscitation. Basic life support procedures. Defibrillator application. Systematic approach to the life-threatening patient. Initial assessment of the severely injured. First aid for injuries and other emergencies. Resuscitation.

Practical classes

Practical teaching is done on models and situation simulations-students among themselves: Examination and triage of the injured. Evacuation of the injured (retrieval, removal and transport). Assessment of vital functions and states of consciousness. Airway maintenance and securing airways. Bolus obstruction - partial, total, procedure algorithms in adults and children. Artificial respiration with expiratory air. Appropriate positions for injured or suddenly diseased patients (lateral-relaxing, semi-lateral, abdominal, semi-lying, semi-sitting, sitting, knee-elbow, kneeling, autotransfusion position). Sudden cardiac arrest - recognition and basic resuscitation methods in adults and children. Application of automatic external defibrillators (ASD). Algorithm of basic resuscitation measures in adults and children. Bleeding-recognition and care procedures for external and internal bleeding. Care procedure for traumatic amputation. Open injuries (wounds). Injuries of the musculoskeletal system (term, types). Temporary immobilization. Injuries to the head and spine. Chest and abdomen injuries. Disposal procedures. Complications and prevention of their occurrence. Heat and electricity damage and disposal. Special injuries, diseases, conditions and care.

Literature

1. ERC (european resuscitation council) e-platform 2016. BLS manual 2016 (PDF).
2. ERC (european resuscitation council) ALS manual 2016 (PDF). Pediatric ALS 2016 (PDF).

Number of active teaching: 45	
Lectures: 30	**Exercises:** 15

Methods of teaching:

interactive lectures, practical classes: demonstrations and simulations of suddenly injured and sick people, providing immediate and initial care. Work on models.

Grading (maximum 100 points)

Pre-Exam commitments	**Points**	**Final Exam**	**Points**
Lectures	5	Written exam	50
Practical classes	15		
Colloquium	20		
Seminar	10		

Communication in Heatlhcare

Study programes:	Nursing
Name of subject:	**Communication in healthcare**
Subjects status:	compulsory
ECTS:	3
Requirement:	none

Subjects objective:

Student by active participation in the process of learning aquires the knowledge in the field of communications, in order to obtain communication competencies and skills needed for professional work in organisational and team communication and communication with partners, and establishing quality contact with users of healthcare services, emphasizing the importance of consultation skills.

Subjects outcome:

After completion of the exam it is expected that a student is competent and qualified for communication and application od aquired knowledge and skills of communication; to implement acquired communication skills among profession and the team, with patients and members of the patients' family, in interprofessional communication, in communication with general public.

It is expected that after completion of the exam a student shows adequate knowledge and understanding of the structure of communication and the role of communication in healthcare with emphasis on consultation skills.

Subjects content:

Lectures

General terms, aspects, types, parts of communication. Vertical and horizontal communication. Verbal and nonverbal communication. Communication styles. Assertiveness. Political and social correctness in communication. Communication competence in professional practice. Professional identity and communication. Establishing the first contact and leading the conversation with patients. Collecting data from patients – informed consent. Provide information to patients. Ethics in communication. Barriers in communication. Communication and psychological distress. Motivation of patients for collaboration with medical staff.

Specificity of application of communicational health-educative methods. Communication and health educative counselling – supportive methods. Communication in the function of social support.

Communication in the function of better adherence. Emotional communication, empathy. Therapeutic and informative communication. Psychological-social aspect of communication. Communication with stressed persons and people in crisis. Communication with people with sensors and speech deficits. Communication with the patients` family. Communication with elderly people and their families. Communication in grief. Teamwork and social partners. Interpersonal communication. Communication in the team. Public relations. Communication in crisis. Management of conflict.

Practical work

Creative workshop trainings for aquiring techniques of verbal communication. Application of SOLER technique. Development of skills of listening, examination, rhetoric, empathy, providing reverse information. Practice for application of clinical knowledge in the process of consultation during patient counselling about pharmacotheapy, effects and rational use of drugs, therapy and outcomes monitoring (DADER метод), history of medication (SOAP method). Skills of asking questions, detection and solving (potential) non-adherence, motivation of patients and removing barriers or conflict in communication. Practicing communication: simulation of communication with specific groups of patients; specific conditions; members of family.

Teamwork: Communication in a team. Communication with media – public performance. Creating health promotion materials. Practicing health-educative methods. Creating written instruction for drug use for specific patient groups. Pictograms. Communication with management and HR.

Literature:

1. Robert S. Beardsley, Carole L. Kimberlin, William N. Tindall. “Communication Skills in Pharmacy Practice: A Practical Guide for Students” Lippincott Williams & Wilkins, 2012.
2. Hugman B.:Healthcare Communication, Pharmaceutical Press, London, 2009.
3. Abdel Tawab R., James D., Davies J.G., Horne R. Guidelines to the Medication-related consultation framework. School of Pharmacy & Biomolecular Sciences; University of Brighton, 2005.
4. National framework of competencies of pharmacists, Pharmaceutical Chamber of Serbia, 2014.

Number of active teaching: 45	
Lectures: 30	**Exercises:** 15

Methods of teaching:

lectures, practice, work in small groups, consultations, presentations in a group, method of development of communication skills.

Grading (maximum 100 points)

Pre-Exam commitments	Points	Final Exam	Points
Lectures	5	Written exam	60
Practical classes	35		

Ethics and Legislation

Study programme:	Nursing
Name of subject:	**Ethics and Legislation**
Subject status:	elective
ECTS:	3
Requirement:	none

Course goals and objectives:

Mastering the basics of applied ethics in healthcare; understanding the practical importance of ethics in healthcare and understanding the differences between ethical and legal issues; developing critical thinking in the process of ethical analysis, understanding national, European and international legislation, knowledge of rights and obligations in health

care and health insurance (compulsory and other types of insurance), as well as the rights and obligations of health care providers, users and third parties.

Course outcomes:
After passing the exam students will be able to evaluate which of the normative principles is important in solving situations from practice, think critically about them, understand the difference between legal and ethical problems; students will have the knowledge to critically assess, in various situations in the provision of health care, whether it involves moral duties, they will gain the competencies (knowledge, skills and attitudes) to apply the laws governing aspects of the healthcare industry, the rights and obligations of the healthcare professional, patient and third party.

Course outcome:
Theory
Historical aspects of the emergence and development of ethics. Normative ethics in healthcare. Ethical principles relevant to the nusing profession. Ethical theories of ethics. Bioethics. Ethics in advertising health care services. Deontology. Failure to adhere to codified principles. Ethics in preclinical and clinical trials (basics). Ethics Committee. Ethics in the industry and drug marketing. European and international medicines regulation - basic guidelines. National health policy and regulation in health and pharmacy (Health Care Law, Health Insurance, Health Chambers, Medicines and Medical Devices Act, Patient Rights Act). Agency for medicinal products and medical devices of Serbia, its role, tasks, organization, activities. Procedure and process for registration of medicines and medical devices. Pharmaceutical regulation - principles (national by-laws and professional acts). Professional associations (national and international). Pharmaceutical chamber of Serbia. Pharmacist license. Court of Honor.
Practice
Case study analysis and discussion (generation and critical evaluation of information and data). Problem based learning (problem solving with proper explanation of ethical concept and legal framework). Panel discussions, application of ethics and the law on current issues: keeping confidential information about patient and medicines, dispensing medicines, misusing medicines, using narcotics. Analysis of oaths, guidelines, principles and codes; Ethical analyzes of practice cases-moral values, errors and consequences of unethical practices in healthcare, misjudgment; ethical controversies. Analysis of international and national ethical standards for pharmacists; Analysis of international and European medicines regulations; Analysis of the place and role of the Agency for Medicines and Medical Devices in national health care.

Literature:
1. Actual Lows and other Acta of Republic of Serbia in the medical and pharmaceutical area
2. ICH regulation
3. Beachamp T. L., Childress J. F.: Principles of Biomedical Ethics, 5thed., Oxford University Press, New York, 2001

Number of active teaching: 45

Lectures: 30 **Exercises:** 15

Applicable teaching methods:
Interactive lectures, workshops: case-study analysis, problem-based learning.

Grading Scheme (max. 100 points)

Pre-exam requirements	Points	Final exam	Points
Lectures	5	Written exam	50
Practical classes	15		
Colloquim	20		
Seminar	10		

Information Systems

Study programmes:	Nursing
Name of subject:	**Information Systems**
Subjects status:	elective
ECTS:	3
Requirement:	none

Subjects objective:
The objective of this course is to provide students with the basic knowledge in the area of application of computer science in medical science, practice and studying. Learning the theory and practice of information processes (collecting, transfering, storage and processing the data), and the importance of content, development and application of information technology in pharmaceutical practice.

Subjects outcome:
After passing the exam, the student is qualified to apply the knowledge of basic software tools, multimedia and internet, in real situations in the medical practice. Student is competent for collecting, storage and processing the data in practice, analysis of feedback information and understanding of information systems in healthcare system.

Content of the course:
Theoretical classes
Multidisciplinary basis of informatics use of information technology in healthcare systems. Data protection in healthcare systems. Specific software used in practice. Healthcare information system, types and reach. Laboratory information system, hospital information system. Medical data. Medical documentation, electronic data record (e-health card, e-prescription). Integrated healthcare system of Republic of Serbia – IZIS; Project „My doctor". Nomenclature and classification systems in healthcare system: international classification of disease, injuries and cause od death; Anatomical Therapeutic Chemical classification of drugs (ATC classification); JKL classification; EAN standards. Drug information sources (Evidence based medicine); software for prevention and detection of drug-drug interactions. Telemedicine and telepharmacy; pharmaceutical sciences in virtual world. Biometrics. E-learning. Safety standards in pharmaceutical data informatics.
Practical classes
Internet. HTML. Windows. Word. Excell. Power-point. The specific software used in practice.

Literature:
1. Anderson PO, McGuinness SM, Bourne PE. Pharmacy Informatics. CRC Press, Boca Raton, London, New York, 2010
2. Rule book for the form and content of drug prescription, ways of issuing and drug prescribing *("Official gazette RS", number 74/2018, 87/2018, 47/2019)*

Number of active teaching: 45	
Lectures: 30	**Exercises:** 15

Methods of teaching:
interactive lectures, practical exercises, practical work on computer.

Grading (maximum 100 points)

Pre-Exam commitments	Points	Final Exam	Points
Lectures	5	Exam	65
Practical classes	30		

Management in Healthcare

Study programme:	Nursing
Name of subject:	**Management in Healthcare**
Subject status:	elective
ECTS:	3
Requirement:	none

Course goals and outcomes:
The objective of the course is to introduce the student with the basic principles of management and organization in contemporary business conditions in healthcare, entrepreneurship and the company milieu; to master the knowledge and skills necessary of management in a competitive economic environment and healthcare system, respecting its specificities, levels and modalities.

Course outcomes:
After taking the course, the student will be able to: understand the specifics of business in healthcare and pharmacy, master basic management methods in the medical field, pharmaceutical market and biochemical laboratory; recognise and apply basic organization/management skills in healthcare through the knowledge of work standards and good practice; understand the processes of supply chain manufacturer-wholesaler-pharmacy-user; apply management skills to the competitive business of the medical laboratory, pharmacy and other market entities.

Course content:
Theory
Management and organization theory - mission, vision, leadership. Organization management (planning, organizing, personnel selection, leading and controlling). Decision making and problem solving. SMART principles as goals of the organization. Specificities of management in healthcare (PEST approach). Donabedian

cycle and principles. Pharmaceutical management. SWOT analysis, benchmarking, globalization, outsourcing in the pharmaceutical business. Good Practice Guides GxP (manufacturing, distribution, laboratory, clinical, pharmaceutical). Good practice in pharmacovigilance. ISO standards (ISO 9001, 14000, 31000); integrated quality management. Deming's management paradigm. Pharmaceutical supply chain management. Product category management. Quality Management Systems (QMS) and risk management. Human resource management (HRM). Management of employee competencies, continuous professional development. Motivation. Financial and project management. Marketing management in pharmacy. Management of public health activities, services and medicines. Management of disease treatment. Resource and process management in the biochemical laboratory.

Practice

Discussion on topics from processes and functions of management: industry, distribution channels, biochemical laboratory, pharmacy. Donabedian's model of structure, processes and outcomes. SWOT analysis. Good laboratory and pharmaceutical practice. Quality standards in work practice. Cost analysis and rational use of medicines. Case study risk management, quality, marketing, promotional activities, inventory, finance, human resources, education, projects, therapy and disease. Management and motivation.

Literature:

1. Kotler Ph. Marketing management. Naklada, Zagreb 2004.
2. National Drug Policy WHO (World Health Organization) 2002, Esential drug list 13th, Organization of United Nations, New York, 2005.

Number of active teaching: 30

Lectures: 15 **Exercises:** 15

Methods of teaching:
Lectures, practice, case analysis, e-learning.

Grading (maximum 100 points)

Pre-exam requirements	Points	Final exam	Points
Lectures	5	Written exam	50
Practical classes	15		
Colloquim	20		
Seminar	10		

Medical Devices

Study programes:	Nursing
Name of subject:	**Medical Devices**
Subjects status:	elective
ECTS:	4
Requirement:	none

Subjects objective:

Introduction to the definition, types and classification of medical devices, legal regulations for medical devices, conditions for production and trade of medical devices, conducting clinical trials, the process of registration of medical devices, vigilance and monitoring of medical devices on the market, technical assessment and conformity assessment of medical devices with basic requirements, advertising and labeling of medical devices.

Subjects outcome:

Upon completion of the course, the student is expected to be able to identify which products fall into the category of medical devices, how to classify medical devices, what conditions should be met for the production and trade of medical devices, how the processes of medical devices registration, clinical trials, advertising, reporting of adverse reactions and monitoring of medical devices on the market are implemended, how the technical assessment and conformity assessment of medical devices is conducted, as well as how the medical device is labeled.

Subjects content:

Lectures

Definition, types and classes of medical devices. Basic characteristics of general, in vitro diagnostic and active implantable medical devices. Laws and regulations in the field of medical devices: national and European regulations. Requirements for the production of medical devices. Structure of the technical document. Conditions

for wholesale and retail trade of medical devices. Registration of medical devices. Conducting clinical trials for medical devices, biocompatibility testing, biological tests for biocompatibility assessment. Reporting adverse reactions to medical devices (vigilance). Monitoring of medical devices (post-marketing monitoring and market surveillance). Medical device quality requirements and technical assessment. Conformity assessment and mark of conformity (CE mark). The process of approving promotional material and advertising a medical device. Data necessary for proper labeling of the medical device.

Practical Classes

Introduction to the characteristics and requirements for medical devices sold in pharmacies. Classification of a medical device - a case study. Assessment of the adequacy of medical device labeling - a case study. Laboratory exercises - technical assessment (quality control) of medical devices, checking the functionality of the medical device.

Literature:

1. Law on medical devices ("Official gazete of the Republic of Serbia" No 105/2017)
2. Council Directive 90/385/EEC on Active Implantable Medical Devices (AIMDD) (1990)
3. Council Directive 93/42/EEC on Medical Devices (MDD) (1993)
4. Council Directive 98/79/EC on in vitro Diagnostic Medical Devices (IVDMD) (1998)
5. Regulation (EU) 2017/745 of the European Parliament and of the Council of 5 April 2017 on medical devices
6. Regulation (EU) 2017/746 of the European Parliament and of the Council of 5 April 2017 on in vitro diagnostic medical devices
7. Gad SC, McCord MG. Safety Evaluation in the Development of Medical Devices and Combination Products. New York: Informa Healthcare; 2008.

Number of active teaching: 45	
Lectures: 30	**Exercises:** 15

Methods of teaching:

Lectures, practical work, case studies.

Grading (maximum 100 points)

Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5	Written exam	70
Practical classes	25		

Organization of Healthcare Activities

Study programme:	Nursing
Name of subject:	**Organization of Healthcare Activities**
Subject status:	elective
ECTS:	3
Requirement:	none

Subject Objective:

The objective of the course is to acquaint the student with the basics of organization of healthcare institutions and the healthcare sector. Understanding the legal framework within which the healthcare system of the Republic of Serbia functions.

To acquaint the student with the most important regulations in the Republic of Serbia governing: healthcare activity; pharmaceutical healthcare; testing, production, marketing, pharmacovigilance, quality control and supervision of medicines and medical devices; rights, obligations, tasks and goals in the field of healthcare; health insurance rights and obligations; patient rights; organization of environmental law, work of chambers of healthcare professionals.

Subject outcomes:

After passing the exam, the student will be able to explain the basic elements of the healthcare system of the Republic of Serbia; state and explain the regulations governing healthcare and healthcare institutions in the RS at the primary, secondary and tertiary levels; analyze the public healthcare service network, explain the principles, system and types of health insurance; state the basic procedures for testing and marketing, manufacturing, pharmacovigilance, advertising, quality control and supervision of medicines and medical devices. After passing

the exam, the student will be able to join the current healthcare system of the Republic of Serbia by applying professional knowledge in the implementation of pharmaceutical healthcare in compliance with the applicable legal regulations.

Subject content:

Theory

Healthcare system, functions, development and goals. Medical technology. Healthcare policy; Organization of healthcare system and institution. Network of healthcare institutions in the Republic of Serbia; Primary, secondary and tertiary healthcare; Pharmaceutical healthcare, (public and hospital pharmacy; galenical laboratory), pharmacy (private practice, health institution); Types of health insurance; Protection of patients' rights; Regulations in the field of medicines and dietary supplements; regulations in the field of medical devices; Production and marketing of medicines; production and trafficking of narcotics. Medication policy; Essential medication lists. Environmental legislation; Nature, environment protection; Waste management; Quality control of healthcare institutions. Healthcare accreditation. Healthcare Chambers.

Practice

Analysis of healthcare legislation in the Republic of Serbia; Pharmacopolitics, Healthcare policy; Healthcare accreditation; Conditions for opening a pharmacy; Supervision of the quality of work of healthcare institutions; Network plan for healthcare institutions in RS; Analysis of the healthcare system in Serbia and abroad; E-prescription; E-healthcare; The national electronic healthcare records system My Doctor; Pharmaceutical waste; Medical waste; Practical examples in the field of environmental protection.

Literature:

1.. The Law on Chambers for Health Workers
2. The Law on Medicines and Medical Devices
3. Public Health Law
4. Health Insurance Act
5. The Patient Rights Act
6. The regulation on the form and content of a prescription, the method of dispensing and prescribing medicines
7. The regulation on closer conditions for issuing, renewing or revoking a license to members of the Chambers for Healthcare Workers
8. The regulation on the list of medicines prescribed and charged with compulsory health insurance funds
9. The regulation on the manner of disposal of medicines, excipients and medical devices
10. The regulation on closer conditions for performing healthcare activities in healthcare institutions and other forms of health care service
11. The regulation on quality control of professional work of healthcare institutions, private practice, healthcare professionals and health associates

Number of active teaching: 45	
Lectures: 30	**Exercises:** 15

Methods of teaching:

interactive lectures, practical classes, analysis and problem solving.

Grading (maximum 100 points)

Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5	Written exam	50
Practical classes	15		
Colloquium	20		
Seminar	10		

Basics of Allergology

Study programes:	Nursing
Name of subject:	**Basics of Allergology**
Subjects status:	elective
ECTS:	3
Requirement:	none

Subjects objective:

Make students familliar with basic knowledge of morphology, anatomy, physiology and ecology of plants important for pharmacy learning about the classification systems as information systems, knowledge of a select group of medicinal plants, application of acquired knowledge in problem botanical herbs and other useful plants.

Subjects outcome:

Independently planning and implementing studies of allergic plants, processing the results, their interpretation and presentation.

Subjects content:

Lectures

The concept of allergies and the allergy. Contact allergy and plant species that cause them. Morphological and biochemical characteristics of plants that causecontact allergies. Pollen allergy and plant species that cause them. Morphological and micro-morphological characteristics of plants causing pollen allergy. Types of the allergy from groups: Cl. Magnoliopsida: Subcl. Magnoliidae, Subcl. Ranunculidae, Subcl. Hamamelididae, Subcl. Caryophyllidae, Subcl. Dileniidae, Subcl. Rosidae, Subcl. Lamiidae, Subcl. Asteridae. Cl. Monocots: Subcl. Liliidae, Subcl. Commelinidae, Subcl. Arecidae.

Practical classes

Getting to know the actual representatives of allergic plants from group Cl. Magnoliopsida: Subcl. Magnoliidae, Subcl. Ranunculidae, Subcl. Hamamelididae, Subcl. Caryophyllidae, Subcl. Dileniidae, Subcl. Rosidae, Subcl. Lamiidae, Subcl. Asteridae. Cl. Monocots: Subcl. Liliidae, Subcl. Commelinidae, Subcl. Arecidae.

Literature:

1. Abbas Abul K., Lichtman Andrew H., Pilai S.: Cellular and Molecular Immunology, 9th edition, Elsevier, 2018.
2. Geha R., Notarangelo L.: Case Studies in Immunology – A Clinical Companion, 7th edition, Garland Science 2016.
3. Kleine-Tebbe J, Jakob T, editors. Molecular allergy diagnostics: innovation for a better patient management. Springer; 2017.
4. Global Atlas of Allergy. European Academy of Allergy and Clinical Immunology, 2014.

Number of active teaching: 45	
Lectures: 30	**Exercises:** 15

Methods of teaching:

lectures, excersises, case studies

Grading (maximum 100 points)

Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5	Written exam	50
Practical classes	25		
Colloquium	20		

Dietary Products

Study programes:	Nursing
Name of subject:	**Dietary Products**
Subjects status:	elective
ECTS:	3
Requirement:	None

Subjects objective:

Introduction of dietary products, food for specific population groups, foods specifically formulated to have particular nutritive content, food supplements and novel food, their content and purposes, relevant legislative in Republic of Serbia, EU, and in the world, in order to give proper advices to the consumer.

Subjects outcome:

Student will be able to consider critically informations about the product on the declaration, helps with the dosage and way of application, advice about possible side effects and interactions, give advice to the consumer in selection of the product, compatibile with its health status and needs.

Subjects content:

Lectures

Definition of various food categories and subcategories, actual legislative in RS, EU and in the world, main rules in giving advices to the consumers, main ingredients in various food categories, quality, quantity of the ingredients, purpose, side effects, interactions: vitamins, minerals, antioxidants, macronutrients, novel food, different types of herbal ingredients, algae and muschrooms, probiotics etc.

Practical Classes

Introduction of actual legislative in RS, EU and in the world pertaining the named categories of food. Declaration analysis of commercialy available products – ingredients, claims, mandatory notes, nutritive declaration etc. Simulation of communication with the consumer in order to get important informations from him and giving the proper, personalized advice about food selection and purchase. Creating the new, defined product, from the ingredient list to the lounching on the market.

Literature:

1. Coates PM, Betz JM, Blackman MR, Cragg GM, Levine M, Moss J, White JD. (editors): *Encyclopedia of dietary supplements*, 2nded. (2010). Informa Healthcare, New York, London.
2. Caballero B. *Guide to nutritional supplements* (2009). Elsevier Ltd., Oxford, UK.
3. Hendler SS, Rorvik D. PDR for nutritional supplements, 2nd Ed. (2008). Thompson Reuters, USA
4. Braun L, Cohen M.: *Herbs and natural supplements*, An evidence-based guide, 3rd ed. (2010). Elsevier, Australia.
5. *ESCOP monographs on the medicinal uses of plant drugs*, 2nd ed. (2009). Completely revised and expanded, Supplement, ESCOP, Devon, UK.

Number of active teaching: 45	
Lectures: 30	**Exercises:** 15

Methods of teaching:

lectures, case studies, e-learning

Grading (maximum 100 points)

Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5		65
Practical classes	30		

Business English

Study programme: Nursing

Course title: **Business English**

Course status: elective

ECTS: 3

Requirement: none

Course goals and objectives

The aim of the course is to master the peculiarities of business English, learn phrases and patterns necessary for communication at a professional level and master the techniques of written and oral expression in professional communication.

Course outcome

The student will be able to apply the acquired knowledge for the purpose of professional communication, create appropriate written forms in accordance with his/her professional communication and use speech patterns adapted to the situation.

Course content

Lectures

CV, basic characteristics, models, elements, rules for writing. Motivational letter. A job interview. Business correspondence: business letter, job application letter, response to an official letter, requesting information, writing an e-mail. Telephone communication at the official level. Business lunch, cocktail, ceremony. Greetings. Random meeting, business meeting, high level meeting, conference call, video conference call. Public address. Creating a business plan. Writing analysis reports. Writing journal and scientific professional text (chemical, pharmaceutical, medical).

Practical Classes

Preparation: CV, motivation letter, business letter, job application letter, response to the official letter, request for information, mail, business plan, analysis report, review professional text, scientific professional text. Oral interpretation: telephone communication at the official level, business lunch, greeting, business meeting, conference call, public address.

Literature

1. Baade Kate, Duckworth Michael, Grant David, Holloway Christopher, Hudson Jane, Hughes John, Naunton Jon, Scrivener Jim, Turner Rebecca: Business Results, Oxford, 2009.
2. Cotton David, Falvey David, Kent Simon: Market Leader, Longman, Harlow, 2001.
3. Field Marion: Improving Your Written English, 3rd ed., How To Books Ltd., McMilan, London, 2001.
4. Business texts from practice (selection).
5. Commercial (authentic) texts on pharmaceutical products (selection).
6. Scientific professional pharmaceutical texts (selection).

Number of active teaching: 45	
Lectures: 30	**Exercises:** 15

Applicable teaching methods

interactive classes, discussions

Grading (maximum 100 points)

Pre-exam requirements	points	**Final exam**	points
Lectures	5	Written exam	30
Practical classes	25	Oral exam	20
Colloquim	20		

Prevention of mental illnesses and promotion of mental health

Study programme: Nursing

Course title: **Prevention of mental illnesses and promotion of mental health**

Course status: elective

ECTS: 2

Requirement: none

Course goals and objectives

To enable students to look at the phenomena of mental health and mental illness from a broader, multidisciplinary and multidimensional aspect, to take responsibility for the protection and improvement of mental health in working with people in the community, but also to care for the sick with the application of high technology and preserved human relations in institutions and their homes.

Course outcome

Acquired knowledge and mastery of the skills of assessing, monitoring, creating and conducting therapeutic communication with users of health care - people with mental health problems, their family members and healthy members of the community.

Course content

Lectures

Subject and theoretical foundations of mental health. Prevention of mental disorders. Mental health throughout the human life cycle: birth and childhood. Adolescence. Adulthood. Age. Contemporary problems of living: alienation. Living in the city environment. Living in the countryside. Nutritional problems. Physical activities. Life crises. Illness and disability in the family. Stress and burnout syndrome. Emergency Situations. Refugees, war operations. Natural disasters. Post-traumatic conditions. Social pathology and maladaptive behaviors: marginalized groups. Extramarital affairs. LGBT population. Domestic violence. Violence against women. Violence against the elderly. Alcoholism. Drug addiction. Prostitution. Religious sects. Pathological gambling. Suicidality. New forms of addiction. Mental hygiene approach to man: health and illness. Dying and death. Dehumanization and humanization of relationships. Communication in the activity of health workers. Comprehensive mental health care.

Practical classes

Follows theoretical classes. Case analysis. Visits by representatives of the respective associations. Preparation of seminar papers. Development of a plan of conceptual projects related to current topics. A guest appearance by a real member of a marginalized group. Workshops. Analysis of existing projects (city, provincial, national) dedicated to marginalized groups of people in the Republic of Serbia. Visit of members of the aid association (to victims of war, natural disasters, etc.).

Literature

1. Glen A.: Mental Hygiene: How To Change Your Mind, CreateSpace Independent Publishing Platform, London, 2018.
2. Tria G. E., Gaerlan J. E., Limpingco D. A.: Principles of Mental Hygiene, Pantas Publishing & Printing, Roterdam, 2010.

Number of active teaching: 30	
Lectures: 15	**Exercises:** 15

Applicable teaching methods

interactive classes, discussions

Grading (maximum 100 points)

Pre-exam requirements	points	**Final exam**	points
Lectures	5	Written exam	60
Practical classes	35		

Palliative care

Study programe: Nursing

Name of subject: Palliative care

Subjects status: elective

ECTS: 2

Requirement: none

Subjects objective

To train students in the provision of psychological care and social care for cancer patients. Health care and pain management. Specifics of palliative medicine and palliative health care.

Subjects outcome

Upon completion of the course, the student will be able to: assist with emergency situations in oncology, apply cancer pain treatment techniques and technologies, apply psychological treatment of oncology patients.

Subjects content

Lectures

Introduction. General principles. Clinical oncology. General principles of oncology. Principles of tumor proliferation. Molecular biology of tumors. Biology of malignant tumor metastasis. Carcinogenesis and mutagenesis. Epidemiology and prevention of malignant tumors. Diagnostic methods in the detection of malignant tumors. Principles of oncology therapy. Basics of radiotherapy. Principles of chemotherapy. Principles of hormone therapy. Clinical oncology. Symptomatic therapy in patients with malignant tumors. Rehabilitation of patients with malignant tumors. Complications of cancer and its treatment. Infections in cancer patients.

Practical Classes

Definition of tumor. TNM classification. Cancer registry and the importance of reporting malignant diseases. The importance of screening in oncology. The concept of an oncological council (the importance of a multidisciplinary approach in the diagnosis and treatment of patients with malignancy). The role of the nurse in oncology. Nursing care of patients with various malignant tumors. A patient with a metastatic tumor - the importance of nursing care and support. The role of the nurse in reducing side effects of therapeutic treatments in oncology. Supportive treatment and care of oncology patients. The importance of the nurse in the rehabilitation of oncology patients. A patient with malignancy in a "protected room".

Literature

1. Matzo M., Sherman D. W.: Palliative Care Nursing, Fourth Edition: Quality Care to the End of Life, Springer Publishing Company, New York, 2014.
2. Taylor R.: Oxford Handbook of Palliative Care, London, 2009

Number of active teaching: 30	
Lectures: 15	**Exercises:** 15

Methods of teaching

interactive lectures, group exercises

Grading (maximum 100 points)

Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5	Written Exam	60
Practical classes	35		

Integrative therapeutic methods

Study programe: Nursing

Name of subject: Integrative therapeutic methods

Subjects status: elective

ECTS: 1

Requirement: none

Subjects objective

The goal of the course is to provide the student with basic information about different understandings and approaches to therapy, enable the acquisition of knowledge about the most important techniques that are included in the term integrative medicine, provide basic information about individual techniques of integrative medicine, and provide prerequisites for considering an integrative approach to therapy.

Subjects outcome

After passing the exam, the student will be able to reason logically about different approaches to therapy and treatment, approaches to therapy and treatment studied by integrative medicine, the basic characteristics of certain methods, the current situation of different types of integrative medicine in Serbia and world trends. Also, the student will be able to interpret the valid legal regulations in Serbia related to the branches of integrative medicine..

Subjects content

Lectures

Presentation of different concepts of defining conventional, complementary and alternative therapy, holistic and integrative approach to treatment. Terms and techniques that today are classified as non-conventional treatment techniques. Therapeutic means in use. Acupuncture (acupressure, magnetotherapy, laser therapy), quantum

medicine (Bi-Digital O-Ring Test, BRT, MRT), herbal and vitamin supplements, homeopathy, unconventional approach to nutrition, essential oils, manipulative therapies (osteopathy, chiropractic), applied kinesiology, naturopathy, relaxation techniques (yoga, meditation, tai chi, autogenic training, hypnosis, etc.), massages (shiatsu, reflexotherapy), anthroposophic medicine, aromatherapy, color therapy, smell therapy, sound therapy, crystal therapy, mud therapy, water therapy, qi-gong, reiki, environmental medicine. Presentation of information on current and new types of complementary therapies (information diagnostics and therapy). The relationship between traditional medicine and alternative therapy. Basic principles of traditional Chinese medicine (acupuncture, tui-na, herbal), campo, Indian (Ayurveda), basics of other traditional medicines. Traditional healing systems in the Balkans. Safety when choosing or using complementary medicine methods. Transformation of alternative into integrative medicine. The right to choose. Holistic approach. Contemporary directions of development of integrative medicine. Experiences of surrounding countries.

Practical Classes

Visits to centers for alternative therapy. Acquaintance with real cases. Discussion. Case analysis. Internet presentations. Visit to the field (practices for the work of certain branches of complementary medicine). Visit of the Serbian Society for Integrative Medicine.

Literature

1. Omura Yoshiaki: Practice of the Bi-Digital O-Ring Test, Ido No Nippon, Tokyo 1986.
2. Robson Terry: An introduction to Complementary Medicine, Allen &Unwin, Sydney, 2003.
3. Micozzi S. Marc: Fundamentals of Complementary and Alternative Medicine, 4th ed., Saunders, Philadelphia, 2010.
4. Kotsirilos Vicki, Vitetta Luis, Sali Avni: A Guide to Evidence-based Integrative and Complementary Medicine, 1st ed., Churchill Livingstone, Edinburg, 2011.
5. Hecker Hans-Ulrich, Steveling Angelika, Peuker Elmar, Kastner Joerg: Color Atlas of Acupuncture: Body Points - Ear Points - Trigger Points (Complementary Medicine), Thieme, 2008.
6. Sutton Amy L: Complementary and Alternative Medicine Sourcebook, Omnigraphics, Detroit, 2010.
7. Zhanwen Liu, Liang Liu: Essentials of Chinese Medicine, Springer, London, New York, 2009.
8. Kligler Benjamin, Lee Roberta: Integrative Medicine principles for practice, Program in Integrative Medicine, University of Arizona. McGraw-Hill Companies, NY, Chicago, London, Madrid, Milan, Sydney, Toronto, Singapur, New Delhi, 2004.

Number of active teaching: 30	
Lectures: 15	**Exercises:** 15

Methods of teaching

interactive lectures, practical teaching, discussions, case analysis

Grading (maximum 100 points)

Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5	Written Exam	70
Practical classes	25		

Health promotion in preschool and school institutions

Study programes: Nursing

Name of subject: Health promotion in preschool and school institutions

Subjects status: elective

ECTS: 1

Requirement: none

Subjects objective:

The purpose of health promotion in preschool and school institutions is the successful development of children and young people so that they become healthy, satisfied, successful, self-aware and responsible people.

Subjects outcome:

To develop a value system in young people, to emphasize the importance of health care, to encourage the development of empathy and sensitivity for the needs of others, but at the same time to warn against unacceptable behaviors and deviant phenomena that must not be tolerated or ignored.

Subjects content:

Lectures

Proper nutrition. Personal hygiene. Physical activity. Promotion of mental health: encouraging and developing self-confidence, developing life skills from communication to decision-making. Prevention (smoking, alcohol, drugs). Prevention of addiction to new phenomena: information and communication technologies, gambling and betting. Prevention of peer violence. Prevention of violence through modern technologies.

Practical Classes

Work in pairs and small groups. Organizing lectures with discussions and panel discussions. Pedagogical workshop. Role Playing. a storm of ideas. Development of attitudes in discussion and debate. Case analysis. Use of available and appropriate content from internet pages. Visit of representatives of preschool or school institutions - joint work on health promotion projects. Workshops. Analysis of the present projects (city, province, republic) dedicated to the promotion and improvement of health. Joint activities with the Institute for Student Protection, Novi Sad. Joint work and guest appearances by representatives of student organizations (senior students) of related faculties.

Literature:

1. Maville J. A., Huerta C. G.: Health Promotion in Nursing, textbook, Cengage Learning, London, 2012.
2. Glanz K., Rimer B. K., Viswanath K.: Health Behavior and Health Education: Theory, Research, and Practice, textbook, Jossey-Bass, New Jersy, 2008.

Number of active teaching: 30	
Lectures: 15	**Exercises:** 15

Methods of teaching:

interactive lectures, practical classes, discussion

Grading (maximum 100 points)

Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5		60
Practical classes	35		

Oncology Patients Nursing

Study programes:	Nursing
Name of subject:	**Oncology Patients Nursing**
Subjects status:	elective
ECTS:	1
Requirement:	none

Subjects objective:

The aim of the course is to provide basic knowledge about the nursing process and health care of oncology patients and the role of the nurse in diagnostic and therapeutic procedures in oncology. Special importance is given to teamwork as well as a holistic approach to patients with malignant diseases and their families.

Subjects outcome:

Upon completion of the course, participants will have basic knowledge about the onset of malignant diseases, prevention, diagnostic procedures and treatment modalities, as well as specific theoretical and practical knowledge in the health care of oncology patients, they will be able to independently carry out specific interventions within the scope of work and authority of therapists, to prepare and participate in the implementation of diagnostic and therapeutic procedures in oncology patients, to know the algorithms of application of cytostatic therapy, to recognize unwanted effects and the way of care, to know the basic principles of pain therapy, symptomatic therapy and palliative care, to know the organization of modern oncology services and the implementation of supportive, symptomatic and palliative care, to be trained for adequate communication with patients and their family members.

Subjects content:

Lectures

Origin and course of malignant disease. Cancer prevention (primary, secondary, tertiary). Secondary prevention measures - screening methods. Diagnosis and diagnostic procedures. Chemotherapy. Adverse effects of chemotherapy. Handling of cytostatics. Surgical therapy. Radiotherapy. Adverse effects of radiotherapy. Common symptoms in cancer patients. Emergency situations in oncological patients. Palliative care. Rehabilitation, quality of life, psycho-oncology.

Practical Classes

Familiarization with the organization of work in the departments and documentation management. Therapeutic anamnesis in an oncology patient. Interventions in patient preparation for diagnostic and therapeutic procedures, participation in the procedure and patient care. Determining diagnoses, outcomes of care, planning and implementation of care procedures (assessment and control of pain, immobility, changes in blood lineage, bleeding, integrity of skin and mucous membrane - oral mucositis, irradiated localizations, care of intravascular approaches), prevention of complications, evaluation. Familiarization with the application of standards - protective clothing, closed systems for the application of cytostatics, laminar chambers, proper use and disposal of used material. Application of health-educational interventions and educational work.

Literature:

1. Tannock I., Hill R., Bristow R., Harrington L.: Basic Science of Oncology, Fifth Edition, The McGraw-Hill Companies Inc, Singapore, 2013.

Number of active teaching: 45	
Lectures: 30	**Exercises:** 15

Methods of teaching:

interactive lectures, practical classes, analysis and problem solving.

Grading (maximum 100 points)

Pre-Exam commitments	Points	**Final Exam**	Points
Lectures	5		60
Practical classes	35		

Intensive Care Unit Nursing

Study programes:	Nursing
Name of subject:	**Intensive Care Unit Nursing**
Subjects status:	elective
ECTS:	1
Requirement:	none

Subjects objective:

The main goals are the acquisition of current theoretical and practical (dexterity, resourcefulness) expert knowledge in the field of intensive care of the critically ill/injured and the ability to apply the acquired knowledge in both professional and research work. The development of critical thinking, independence in the implementation of health care, the implementation of certain diagnostic and therapeutic procedures and the development of teamwork skills.

Subjects outcome:

The student will be able to describe clinical conditions in which it is necessary to carry out multidisciplinary care and how to care for patients in certain clinical conditions.

Subjects content:

Lectures

Airway - assessment, maintenance, provision. Breathing - assessment of adequacy, ventilatory support. Circulation - assessment of adequacy, circulatory support. Numerical systems for assessing the condition of the critically ill/injured. Cardiocirculatory arrest. Post-reanimation disease. Brain death. Intensive care of patients with acute circulatory disorders: cardiogenic, circulatory, cellular shock. Intensive care of patients with acute disorders of the respiratory system: acute asphyxia. Intensive care of patients with acute disorders of cardiac function. Intensive care of patients with disorders of the central nervous system: comatose states. Intensive care of acutely intoxicated

patients. Intensive care of traumatized patients. Intensive medical care of burn patients. Specifics of intensive care in pediatrics. Intensive care of transplant patients. Early rehabilitation in the intensive care unit.

Practical classes

Pre-hospital/hospital access to the critically ill/injured. Airway. Breathing and artificial ventilatory support. Circulation and circulatory support. Basics of volume replacement therapy. Basics of pharmacotherapy in support of vital functions. Measures of cardiopulmonary-cerebral resuscitation. Measures of cardiopulmonary-cerebral resuscitation. Electrical defibrillation and cardioversion. Pediatric measures of cardiopulmonary-cerebral resuscitation. Surgical intensive care unit. Cardiology Intensive Care Unit. Intensive care unit. Pediatric intensive care unit.

Literature:

1. Smith-Gabai H.: Occupational Therapy in Acute Care, AOTA Press, Maryland, 2011.
2. Shaikh N.: Intensice Care, Jaypee, New Jersey, 2018.
3. Woodrow P.: Intensive Care Nursing, A Framework for Practice, textbook, Routledge, London, 2018.

Number of active teaching: 45	
Lectures: 30	**Exercises:** 15

Methods of teaching:

lectures, practical classes, demonstrations, exercises.

Grading (maximum 100 points)

Pre-Exam commitments	Points	Final Exam	Points
Lectures	5	Exam	60
Practical classes	35		