Study programme: Health care

Type and Level of Studies:Basic professional studies

Course code and title: Chemistry

Teacher (Surname, middle initial, name): Marjanovic M.Vesna

Course status: Compulsory

Number of ECTS credits: 6

Prerequisites: none

Course aims:

Gaining knowledge in organic chemistry and chemistry of biomolecules that are necessary for successful attending further studies and for better understanding of physiological and pathological processes in organism. Introduction to: 1.nomenclature of organic compounds; 2.basic concepts of structures and reactions of organic compounds and functions of biomolecules; 3.dependency of physical and chemical characteristics and structure of molecules; 4.basic techniques of segregation,purification and identification of organic compounds; 5.reference values of biochemical parameters.

Learning outcomes:

Students are able to name organic compounds according to IUPAC nomenclature,recognize physical and chemical characteristics of organic compounds.,understand structure and function of biomolecules,understand characteristic transformations of functional groups and mechanisms of organic reactions. They will be able to recognize biochemical processes and metabolic tracks. Students will also be able to isolate,purify and identify organic compounds on their own.

Syllabus

Theoretical instruction:Division of organic compounds. Functional groups. Types of organic chemical connections. Nature of chemical connections,chemical connections of carbon. Hydrocarbons (Alkanes,alkenes,dieni,alkynes;Acyclic hydrocarbons,aromatic hydrocarbons). Halogen derivatives. Organic compounds of oxygen. Carbonyl compounds. Carboxylic acids. Derivatives of carboxylic acids. Organic compounds of nitrogen. Carbohydrates (structure,physical and chemical characteristics and main representatives). Amino acids. Proteins (structure and characteristics). Nucleic acids (composition and structure of DNA and RNA). Natural aromatic compounds. Lipids (composition,structure,characteristics). Terpenes and terpenoids. Vitamins. Steroids ,hormones. Heterocyclic compounds. Alcaloids. Antibiotics.

Practical teaching:Account and experimental practices are in accordance with the lectures.
Account practice: After mastering theoretical basics of some chapters,students check their knowledge by doing some tasks for which it is necessary to apply and combine basic concepts and reactions.
Experimental practice:Safety in chemical laboratory. Utensils,vessels,equipment and basic operations in experimental work with organic substances. Basic methods of extracting and purifying organic substances(extraction,sublimation,destilation,filtration,precrystallization). Proving of carbon and hydrogen in organic substance. Saturated hydrocarbons. Unsaturated hydrocarbons. Aromatic hydrocarbons. Alcohols. Phenols. Aldehides and ketones. Carboxylic acids. Derivatives of carboxylic acids. Reactions of glycides. Reactions of proteins.

Literature:

1. **P.Volhard,N.Sor;Organska hemija:struktura i funkcija,Data status,Nauka,Beograd,2004.**
2. **S.Petrovic,D.Mijin,N.Stojanovic;Hemija prirodnih organskih jedinjenja,TMF,Beograd,2009.**
3. **J.Tomin,M.Abramovic;Organska hemija-udzbenik za studente medicine i stomatologije,Prosveta,Nis,2004.**
4. **V.Marjanovic;Hemija 2-Predavanja,Uzice,VPTS,2015.**
5. **V.Marjanovic;Praktikum za eksperimentalne i racunarske vezbe iz hemije,Uzice,VPTS,2013.**

Number of active teaching classes: 60				Other classes:
Lectures: 2x15=30	Practical classes: 2x15=30	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.			
Knowledge evaluation (maximum 100 points)			
Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	5	Written exam	40
Practical classes	25	Oral exam	-
Colloquia	30		
Seminar papers	-		
Assessment methods:			

Study programme: Health care

Course code and title: Emergency medicine with health care

Teacher (Surname, middle initial, name): Jovicevic M.Slobodan

Course status: Elective

Number of ECTS credits:6

Prerequisites: none

Course aims:

Students should be offered basic theoretical knowledge from various types of urgent states in medicine,such as:surgery and traumatology,internal medicine,neurology,gynaecology and obstetrics,psychiatry,pediatrics and other kinds of medicine.

Learning outcomes:

Having finished theoretical and practical teaching,thanks to gained knowledge and skills,students will be able to recognize and diagnose urgent conditions and apply learned measures and procedures in primary care of acutely sick and injured.

Syllabus

Theoretical instruction:

Emergency medicine – concept and definition. Urgent patient – concept,definition,types. Basics of organization of urgent medical help. Trauma – algorhythms. Polytrauma. Head and neck trauma,thorax,abdomen,bone-jointed system. Trauma score. Traumatic shock and recovery of lost volume. Immobilization and transport.
Burns –algorhythm. Cardiac arrest and cardiopulmonal resuscitation. Elementary life support,extended life support and post-resuscitation treatment of adults and children,especially babies and newborns. Cardiac arrest and KPR in pregnancy and during labour. KPR in particular situations-electric shock,thunder strike,drowning. Foreign body in airway. Acute coronary syndrome-myocardial infarction and stenocardia. Dissection of aorta. Difficult rhythm disorders and implementation of impulse through heart. Hypertensive crisis. Acute lungs diseases and process of curing and treatment-asthma,thromboembolism of lungs,lung oedema,pneumothorax. Acute diseases of central nervous system-brain tumour,episode losses of consciousness-syncope,covulsions,epilepsy. Coma,GKS and procedures at loss of counsciousness. Acute diseases of abdomen,bleeding in abdomen. Acute diseases in gyneacology and obstetrics-extrauterine pregnancy,bleeding,eclampsia. Acute psychiatric illnesses.

Practical teaching:

Organization of emergency service on primary and secondary level of health protection, functionning of Emergency squad and Urgent admission. Triage of patients. Role of a nurse in triage. BLS,ALS. Role of a nurse in CPCR. Intubation,mechanical ventilator support. Monitoring of vital parameters. Defibrillation. Communication with patients and their families. Keeping records of patients. Medicamentous therapy in urgent medicine. Introduction with urgent conditions in all branches of medicine on the spot (Emergency service). Exitus letalis in emergency service, procedure. Cultural and religious specifics in emergency medicine.

Literature:

1. **Ivan D.Ristic;Praktikum Urgentne medicine,III izdanje,IP obelezja,2012.**
2. **Aleksandar P.Pavlovic;Kardiopulmonalno cerebralna reanimacija,III izmenjeno i dopunjeno izdanje,IP Obelezja,2011.**
3. **Ivan D.Ristic;Urgentna medicina kroz primere iz prakse,4.izdanje,IP Obelezja,2008.**
4. **Slavica Simeunovic;Urgentna stanja u internoj medicini:prehospitalni i rani hospitalni. Nasa knjiga,2008.**
5. **Mileta Poskurica;Hitna stanja u medicini;Medicinski Fakultet,Kragujevac,2006.**

Number of active teaching classes: 60				Other classes:
Lectures:	Practical classes:	Other teaching forms:	Study research	8x15

2x15	3x15		work:	
Teaching methods: Lectures, exercises, assignments, projects, consultations.				
Knowledge evaluation (maximum 100 points)				
Pre-exam obligations	**Points**	**Final exam**	**Points**	
Activity during lectures	20	Written exam	-	
Practical classes	-	Oral exam	50	
Colloquia	20			
Seminar papers	10			
Assessment methods:				

Study programme: Health Care

Type and level of studies: Undergraduate Vocational Studies

Course title: English 1

Teacher: Marinković M. Ivana

Course status: Elective

Number of ECTS: 5

Prerequisites: None

Course aim: Acquiring the necessary knowledge of English for General Purposes, as well as of English for Specific Purposes; further development of language skills; reading comprehension and conversation about profession-specific topics; providing students with skills required for both oral and written communication in English. on health care topics.

Course outcomes: Students can successfully use not only General English, but also English for Specific Purposes, and therefore can keep pace with the latest scientific achievements. Students are independent in written and oral communication, both in every-day situations and business communication.

Syllabus:

Theoretical instruction:

Mastering basic grammatical structures: nouns (plural of nouns), pronouns (personal, possessive, relative, reflexive), relative pronouns and clauses, articles (types and use), adjectives and adverbs (comparison), numbers, verbs (tenses).

English for Specific Purposes – introduction to specialized vocabulary using texts about health care topics.

Business English – mastering formal expressions and business correspondence rules.

Practical instruction:

Pracising acquired grammatical rules and vocabulary through written exercises and speaking activities; Oral and written business communication (formal letters, orders, negotiations, contracts, payment, delivery, CV, covering letter); translation of specialized texts; discussions about culture and behavior in formal and informal meetings.

1. Allum, V., McGarr Ptatricia, Cambridge English for Nursing – Intermediate Plus, Cambridge University Press
2. Naunton, J., 2005, ProFile 2 - Intermediate, Oxford, Oxford University Press
3. Murphy, R., 1990, English Grammar in Use, Cambridge University Press
4. Thompson A.J., Martinet, A.V., 1994, A Practical English Grammar, Oxford, OUP
5. Student's Grammar (practice material by Dave Willis), 1991, Collins Cobuild
6. Mićić, S., Medicinski rečnik, englesko-srpski, srpsko-engleski, Zavod za udžbenike, Beograd

Number of active teaching classes: 60				Other classes:
Lectures: 2*15=30	Practical classes: 2*15=30	Other forms of instruction:	Research study:	

Teaching methods: Verbal (monologue, dialogue, discussion), work with text, heuristic method, audio-visual methods, grammar-translation method, etc.

Knowledge evaluation (maximum number of points: 100)

Pre-exam obligations	**Points:**	**Final exam**	**Points:**
Activity during lectures	10	Written exam	15
Practical classes	10	Oral exam	15
Colloquia	50		
Seminar papers			

Study programme: Health Care

Type and level of studies: Undergraduate Vocational Studies

Course title: English 2

Teacher: Ivana M. Marinković

Course status: Elective

Number of ECTS: 5

Prerequisites: Passed examination in English 1.

Course aim:
Acquiring the necessary knowledge of English for General Purposes, as well as of English for Specific Purposes; further development of four language skills; reading comprehension development and communication about profession-specific topics. Providing students with the skills required for both oral and written communication in English on medicine-related topics.

Course outcomes:
Students can successfully use not only General English, but also English for Specific Purposes, and therefore can keep pace with the latest scientific achievements. Students are independent in written and oral communication, both in every-day situations and business communication; they can prepare and give presentations in English.

Syllabus:

Theoretical instruction:
Mastering complex grammatical structures: conditional sentences, passive, reported speech (sequence of tenses), modal verbs, impersonal verbs.
English for Specific Purposes – introducing students to profession-specific vocabulary through work with health-care texts.
Business English –business correspondence rules and formal expressions.

Practical instruction:
Pracising acquired grammatical rules and vocabulary through written exercises and speaking activities; Oral and written business communication (formal letters, orders, negotiations, contracts, payment, delivery, CV, covering letter); translation of specialized texts; discussions about culture and behavior in formal and informal meetings; preparing PowerPoint presentations of seminar papers and giving them in front of peers.

1. Allum, V., McGarr Ptatricia, Cambridge English for Nursing – Intermediate Plus, Cambridge University Press
2. Naunton, J., 2005, ProFile 2 - Intermediate, Oxford, Oxford University Press
3. Murphy, R., 1990, English Grammar in Use, Cambridge University Press
4. Thompson A.J., Martinet, A.V., 1994, A Practical English Grammar, Oxford, OUP
5. Student's Grammar (practice material by Dave Willis), 1991, Collins Cobuild
6. Mićić, S., Medicinski rečnik, englesko-srpski, srpsko-engleski, Zavod za udžbenike, Beograd

Number of active teaching classes: 60				Other classes:
Lectures: 30	Practical classes: 30	Other forms of instruction:	Research study:	

Teaching methods: Verbal (monologue, dialogue, discussion), work with text, heuristic method, audio-visual methods, grammar-translation method, etc

Knowledge evaluation (maximum number of points: 100)

Pre-exam obligations	**Points:**	**Final exam**	**Points:**
Activity during lectures	10	Written exam	15
Practical classes	10	Oral exam	15
Colloquia	40		
Seminar papers	10		

Study programme: Health care

Type and Level of Studies: Basic professional studies,first level of studies

Course code and title: Epidemiology with health care

Teacher (Surname, middle initial, name): Pavic M.Sladjana

Course status: Compulsory

Number of ECTS credits: 7

Prerequisites: none

Course aims:

Gaining knowledge and skills in recognizing symptoms and signs of infectious diseases at elderly people and children and mastering skills necessary for individual or team prevention of emergence and spreading infectious diseases,for application of diagnostic and therapeutic procedures and modern nursing of patients through application of health care processes and required evaluation.

Learning outcomes:

Adopted knowledge,skills and procedures specific for health care of the infected of infectuous diseases in all population groups (grown-ups,children,pregnant women,women in labour,newborns) through application of processes of health care,respecting measures of prevention and protection. Students will master standards for preventing intrahospital infections,implementation of disinfection and sterilization processes,triage and transport of infected patient,as well as infectuous sickness material,with special attention to implementation of personal hygiene measures (hand hygiene,work clothes hygiene).

Syllabus

Theoretical instruction:

Specifics of health care in infectology. Epidemiologic characteristics of infectious diseases. Infectious agents as biological weapons. Prevention measures towards patient and patient's surroundings. Nurse's interventions in diagnosing infectious diseases. Specifics in implementing therapy and nourishment of the infected. Health care of the infected of respiratory diseases (flu,rash fever,scarlet fever,brain fever,mononucleosis),intestinal infections (typhoid,hepatitis,botulism,cholera,trichinellosis), vector infections (malaria,Lyme disease,typhus fever),hepatitis B,C, AIDS, rabies, tetanus, haemorrhagic fever.

Practical teaching:

Regular triage and admission of infected patients. Isolation of patients and organization of work in quarantine. Preveting occurrence and spreading of intrahospital infections (regular triage,disposal and transport of infectious waste,regular washing hands and use of disinfectants). Procedure of immunization of children and grown-ups. Protection of patients wounded in contact with potentially rabbid animal. Regular protection of health workers during taking blood from AIDS and hepatitis patients for lab analysis. Technique of sampling material and respecting standards of asepsis for bacteriological analysis.

Literature:

1. **Maksimovic M.:Zdravstvena nega u infektologiji,autorsko izdanje,Beograd,2006.**
2. **Bozic M.i saradnici:Infektivne bolesti,Medicinski fakultet,Univerzitet u Beogradu,2013.**
3. **Delic D.:Akutna infekcija jetre;Zavod za udzbenike i nastavna sredstva Beograd,1999.**
4. **Delic D.:Infektivne bolesti-laboratorijska dijagnostika i lecenje,Zavod za udzbenike i nastavna sredstva Beograd,2001.**
5. **Micic D.,Pavlovic M.;Bolnicke infekcije,Asta Clinica,Klinicki centar Srbije,Beograd,2003.**

Number of active teaching classes: 60				Other classes: 8x15
Lectures: 2x15	Practical classes: 2x15	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**

Activity during lectures	10	Written exam	-
Practical classes	10	Oral exam	30
Colloquia	30		
Practical knowledge check	20		
Assessment methods:			

Study programme: Health care

Type and Level of Studies:Basic professional studies,first level

Course code and title: FINAL THESIS

Teacher (Surname, middle initial, name):

Course status: Compulsory

Number of ECTS credits: 8

Prerequisites: passed all exams

Aim of the final work:
Student will master techniques of writing professional research work and its presenting.

Expected outcomes:
Students will be capable of research in the area of nurse's profession,with all elements needed:formulation of topic, literature overview,methodology of work production,collecting data procedure,production of work and oral presentation of work results.

General contents:
Theoretical teaching
In theoretical part,final work should contain:title,names of candidate and mentor,accurately defined task,summary in Serbian and English language,work contents,introduction,basic theoretical part,research and discussion,conclusion,insets and literature.
Title should clearly refer to the subject,that is to contain key words and it should be shortest possible. The task contains basic theses given by menthors. Summary should contain up to 150 words, with emphasised subject,procedures and main results achieved in work. Contents represents work overview,list of titles and subtitles with page numbers. Introduction,basic part,research,discussion and conclusion represent main parts of work that should include:topic and aim,procedures and methods used for solving problems and short work overview. Basic part should be exposed in detail. It should be organized in a few parts that contain:application of methods and procedures for particular task. Conclusion should demonstrate short and clear what has been done in the work,advantages and disadvantages of suggested solution and practical use of obtained results. Literature should be relevant and new.
Final work is defended in front of the committee that consists of three members (president,mentor and member). Oral defense is public. During the defense, a candidate exposes written part of work. A candidate may use a computer,a projector, slides or posters. After the defense,a candidate answers the questions of the committee members. After that,the committee decides about the grade and announces it to the candidate.

Methods of performing:
During the 6th semester,students choose a subject within which they are going to perform the final work. Written work method and oral presentation method (computer,projector,slides or posters).

Lectures:	Practical classes:	Other teaching forms:	Study research work:	Other classes:

Knowledge evaluation (maximum 100 points)			
Written work elaboration	**60**		**Points 100**
Oral work defense(presentation)	40		

Assessment methods:

Study programme: Health care

Type and Level of Studies:Basic professional studies,first level

Course code and title: Gerontology with health care of old people

Teacher (Surname, middle initial, name): Micic S.Olivera

Course status: Elective

Number of ECTS credits:6

Prerequisites: none

Course aims:

Gaining knowledge and application of tests of functional abilities with the aim of viewing needs for health care. Qualifying for organization and team work for health care of older people in hospital and out-patient institutions.

Learning outcomes:

Students will have knowledge about specifics of health care of old people (viewing needs,communication,work with aging person's family).

Syllabus

Theoretical instruction:

Theory of aging,specifics of defining aging,health problems,illnesses in old age,prevention of complications,curing,treatment and rehabilitation. Categorization of treatment,therapeutic procedures,specifics of communication. Palliative care and work with a family. Methods of providing for the aging people: family,old people's home accomodation,hospital treatment. Education of population for volunteer work. Local community concern for life improvement of aging population (societies,daily centers…).

Practical teaching:

Assesment of home care. Collaboration with Centers for social work. Visit to the club for old people. Demontration of care procedures at home. Family education for care. Preparation and accommodation of an old person into nursing home. Particularities of admission. Application of procedures of health care in solving general and specific problems. Training visitors and family of the old people-preparation for return home. Introducing to the work organization of institutions for treatment of old people. Practical application of tests (Kats's index for fall prevention,Norton's and Braden's scale for risk assesment of decubitus appearance etc.).

Literature:

1. **Sarenac D.,Zdravstvena nega starih,Licej,Beograd,2009.**
2. **Milosavljevic N.:Gerontologija,centar za preventivni rad i edukativnu delatnost u zdravstvu,Novi Sad,1993.**
3. **Kekus D.,Komunikacije u profesionalnoj praksi zdravstvenih radnika,Beograd,2003.**

Number of active teaching classes: 60				Other classes: 8x15
Lectures: 2x15	Practical classes: 3x15	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Written exam	-
Practical classes	10	Oral exam	30
Colloquia	20		
Seminar papers	10		
Practical work	**20**		

Study programme: Health care

Type and Level of Studies:Basic professional studies

Course code and title: Gynaecology and obstetrics with health care

Teacher (Surname, middle initial, name): Acimovic P.Milena

Course status: Compulsory

Number of ECTS credits: 7

Prerequisites: none

Course aims:

-Students should gain necessary knowledge about gynaecology and obstetrics in order to build further knowledge about health care in gynaecology and obstetrics.

-Students should form positive attitude towards child-bearing in order to contribute to health-eduacational work with women,so that they would be prepared for healthy pregnancy and motherhood.

-Students should understand specific problems of women in all life times,so as to be prepared to work on prevention of diseases through health care.

Learning outcomes:

Students will be qualified to:

-get theoretical knowledge for assesment of patient's state

-setting up nurse's diagnosis,making plans and realization of treatment,taking part in prevention of gynaecological illnesses,diagnostics,curing and rehabilitation,work in counselling and other gynaecologic-obstetrician units

Syllabus

Theoretical instruction:

Characteristics of female reproductive system. Hormones in gyneacology. Physiology of female reproductive organs. Malformations of female reproductive organs. Position of inner female reproductive organs. Injuries and illnesses of female reproductive organs. Benign tumors in gyneacology. Malign tumors in gyneacology. Operative procedures in gyneacology. Reproduction. Physiology of reproduction. Conception and pregnancy. Physiology of pregnancy. Pathological states during pregnancy. Miscarriage. Bleeding during pregnancy and delivery. Obstetric operations. Delivery. Pathological states during delivery.

Practical teaching:

Preparation of women for examination and diagnostic procedures. Practice in operational theatre,maternity hospital,intensive care in order to master nurse's contents of work in the field of health care in gyneacology and obstertics.

Literature:

1. **Zivanovic V.:Zdravstvena nega u ginekologiji i akuserstvu;dopunjeno autorsko izdanje;Dragan Srnic,Sabac,2008.**
2. **Mladenovic D.i sarad.:Ginekologija i akuserstvo;Zavod za udzbenike i nastavna sredstva,Beograd,2001.**
3. **Zivanovic V.:Zdravstvena nega u ginekologiji i akuserstvu,autorsko izdanje,Beograd,2008.**
4. **Plecas D.:Ginekologija i akuserstvo,udzbenik za studente medicine,Beograd,2010.**

Number of active teaching classes: 60				Other classes: 8x15
Lectures: 2x15	Practical classes: 3x15	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	15	Written exam	-
		Oral exam	30
Colloquia	30		

Seminar papers	25		
Assessment methods:			

Study programme: Health care

Type and Level of Studies:Basic professional studies

Course code and title: Health care organization

Teacher (Surname, middle initial, name): Sagic M.Zorica,Tanaskovic R.Zorica

Course status: Compulsory

Number of ECTS credits: 5

Prerequisites: none

Course aims:

Students gain knowledge and skills about general concepts and definning management,historical development and management theories,functions of management,research and improvement of service quality,integrations of management functions in organizing health care.

Learning outcomes:

Students will be able to define management functions and carry it out in personal practice;to integrate management functions in organizing health care; to improve health care organization in their practice,and to upgrade service quality through research.

Syllabus

Theoretical instruction:

Aim,task and development of the organization theory. Defining management,historical development and theories,functions of management. Personnel function and personnel policy. Motivation,theory of motivation. Communication in the organization of nurses' employment. Organization, division of work and levels of nurses' management. Organizational design and organizational culture in health institution. Organizational model of health care,planning,importance of sisterhood in planning changes. Research and development. Time management. Implementation of control and monitoring in providing quality of health care and services. Assessment of work success,professional and ethic elements of management. Marketing.

Practical teaching:

Practical survey of organizational strucure and scheme of nurses' employment,introduction of modern organizational models of treatment of patients,planning in sisterhood and planning of changes. Practical survey of implementation of control and monitoring in providing quality of health care in istitutions. Establishing system of exploiting capacities.

Seminar papers:

Topics for seminar papers (defining,cosulting,survey and defence).

Literature:

1. **Lj.Milovic:Organizacija zdravstvene nege sa menadzmentom,Naucna,2003.,Beograd**
2. **P.Micovic:Zdravstveni menadzment,«Obelezja«,Beograd,2008.**
3. **M.Martinovic:Organizacija preduzeca,VPTS,Uzice,2008.**

Number of active teaching classes: 60				Other classes: 9x15
Lectures: 2x15	Practical classes: 2x15	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Written exam	50
Practical classes	10	Oral exam	-
Colloquia	20		
Seminar papers	10		

Assessment methods:

Study programme: Health care

Type and Level of Studies:basic professional studies,first level

Course code and title: Health care

Teacher (Surname, middle initial, name):Bozovic M.Milos

Course status: Compulsory

Number of ECTS credits: 6

Prerequisites: none

Course aims:
Gaining specific knowledge in health care and developing skills for implementation procedures of health care.

Learning outcomes:
Students will form positive attitude towards profession and beneficiaries of health care. They will be able to apply independent and interdependent nurse functions according to the teaching plan.

Syllabus
Theoretical instruction:
Concept of health care and sisterhood. Historical development of health care and modern sisterhood. Education of nurses. Disciplines of health care. Principles of health care. Methods and models in the organization of health care system. Methods and strategic approach in the system of implementation of care. Nurses' functions and competence.Health care in primary health protection, prevention programmes of leading diseases. Health care in clinical-hospital practice,admission and release of patients,progressive care,conduction of basic health procedure. Documentation of health care. Standards and criteria in health care. Work quality in sisterhood. Protection and selfprotection of nurses' health.

Practical teaching:
Establishment of interactive relation between nurse and patient. Admission of patients in health institution. Prevention of intrahospital infections. Asepsis,antisepsis and sterilization.Functional sick bed. Change of location,transfer of patients. Vital functions monitoring. Nurses' interventions related to care,diagnosis and therapy. Nutrition and elimination. Nursing bed-ridden patients. Complications of inactivity and prevention. Participation of family members in nursing. Personal protection of nurses. Documenting of nurses' interventions.

Literature:

1. **Tijanic M.,Djuranic D.,Rudic R.,Milovic LJ.;Zdravstvena nega i savremeno sestrinstvo,Beograd,2010.**
2. **Jolic M.,Vicevac Lj.,Djordjevic D.,;Nega bolesnika opsta i specijalna,Velarta,Beograd,1995.**
3. **Sestrinske procedure,odabrana poglavlja u knjizi Nursing procedures,prevod cetvrtog izdanja,Datastatus,Beograd 2010.**

Number of active teaching classes: 60				Other classes:
Lectures: 2x15	Practical classes: 2x15	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Written exam	-
Practical classes	15	Oral exam	30
Colloquia	30		
Seminar papers	15		

Assessment methods:

Study programme: Health care

Type and Level of Studies:Basic professional studies

Course code and title: Health education

Teacher (Surname, middle initial, name):Savic Bozovic S.Dara

Course status: Compulsory

Number of ECTS credits: 6

Prerequisites: none

Course aims:
Gaining specific knowledge from the domain of health education,as well as health protection of health workers and users of health services.

Learning outcomes:
Students will be able to analyse and manage the risk in public health service and to plan health and education methods. Health protection and protection of health workers and users of health services.

Syllabus
Theoretical instruction:
Hygiene and health. Hygienic conditions of planning and construction of health institutions. Air quality in health institutions. Brightness,ventilation and heating. Water and health. Health safety of drinking water. Methods of water supplying of health institutions. Disinfection of water. Insuring constant control of water safety in health institutions. International and national legislation in the area of health safety of drinking water. Disposition of solid and liquid waste materials. Disposition of medical waste. International and national legislation in the area of disposition of dangerous medical waste. Hygienic and epidemiologic correct solutions for sanitary space. Personal hygiene of health workers. Hygienic procedure in personal hygiene maintenance of patients. Hygienic correct procedure with hospital laundry. Hygienic demand for kitchen area and distribution of food. Use of "NASSR" system in handling food and drinking water. International snd national legislation in the domain of health safety of food and "MASS CATERING". Establishing critical points in healt institution. Epidemiologic importance of establishment of critical points in health institutions of various purpose. Plan for control of critical points in health institutions. Managing risk in health institutions. Promotion of health. Health education-definition,aims and approach. Methodology of health education work. Health education means. Planning in health education. Patient's satisfaction with the given service. Presentation of seminar papers.

Literature:

1. **Novakovic B.,Grujic V.:Higijena i zdravstveno vaspitanje;Edicija udzbenici,Medicinski fakultet u Novom Sadu,2005.**
2. **»Vodic dobre prakse u oblasti sanitarnog nadzora«,Ministarstvo zdravlja Republike Srbije,Sektor za sanitarni nadzor i javno zdravlje,Gradski zavod za zastitu zdravlja,Beograd,Beograd,2005.**
3. **http:/www.who.int**
4. **Kekus D.;Zdravstveno vaspitanje,idanje 2,autor,Beograd,2009.**

Number of active teaching classes: 60				Other classes:
Lectures: 2x15	Practical classes: 0	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	20	Written exam	-
Practical classes	-	Oral exam	30
Colloquia	30		
Seminar papers	20		

Assessment methods:

Study programme: Health care

Type and Level of Studies:basic professional studies

Course code and title: Informatics in health care

Teacher (Surname, middle initial, name): Petrovic M.Slobodan

Course status: Compulsory-professional

Number of ECTS credits: 6

Prerequisites: none

Course aims:
Gaining knowledge and skills in informatics literacy and implementation of information-communication technologies in medicine.

Learning outcomes:
Students are able to use necessary functions of operative system,Internet service (Web,e-mail),text editing,creating presentations and use medical informational system.

Syllabus
Theoretical instruction:
Use of computers(computers' role,algorhythm and computer program). Basics in software and hardware computer architecture. System and applicational software. Basics of computer networks and Internet. Databasis and informational systems. Health service informational system. Use of computers in medicine(computer process of medical data,medical informational systems,standards in medical informatics,E-health service)

Practical teaching:
Solving problems by using computers (role of computer,algorhythm and computer ptogramme). Basic hardware and software computer architecture. Basis of system software (operative system,managing files,auxiliary system programs). Purpose and types of application software. Basics of computer network and Internet and safety of computer networks. Mobile computing. Hardware of personal computers. Software programming of computers. Databasis and informational systems. Use of Internet servise. Use of office applications for text editing,cross-tabular calculations,computer presentations,creatin simpler presentations. Simple statistic processing of medical data using programs for cross-tabular calculations. Use of medical information system Heliant Health.

Literature:

1. **Vladan Stevanovic,ECDL moduli 1 i 2,Microsoft Windows 7,Sluzbeni glasnik,2013.**
2. **Milorad Markovic,Obrada teksta:Word 2013 ECDL5.0 Modul 3.Mikro knjiga,2015.**
3. **Vladan Stevanovic,ECDL modul 4,Tabelarne kalkulacije,Microsoft Excel 2010.Sluzbeni glasnik,2013.**
4. **Korisnicko i administrativno uputstvo za rad u Heliant Health.Heliant,2015.**
5. **Dacic M.:Statistika i informatika u zdravstvu,VZS,Beograd,2005.**

Number of active teaching classes: 60				Other classes:
Lectures: 15x2=30	Practical classes: 15x2=30	Other teaching forms: -	Study research work:-	-

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Written exam	-
Practical classes	10	Oral exam	30
Colloquia	20		
Practical examination	30		

Assessment methods:

Study programme: Health care

Type and Level of Studies:Basic professional studies,first level

Course code and title: Internal medicine with health care 1

Teacher (Surname, middle initial, name): Lucic S.Gordana

Course status: Compulsory

Number of ECTS credits: 7

Prerequisites: none

Course aims:

Gaining knowledge about prevention of diseases,recognizing symptoms and signs of illnesses in internal medicine,methods of examination,curing and observing needs for health care,nurses' intervention,level of independence and responsibility of a professional nurse. Getting knowledge about etiopathogenesis of diseases,manners of manifestation,course and curing of a disease with special turn on modern diagnostic and therapeutic procedures.

Learning outcomes:

Developing awareness of the importancy of a professional nurse in all segments of patient's treatment, from prevention and curing to tending and therapy, and all as an infallible part of responsible and professional team work. Student will master skills of health care of internal medicine patients;planning,realization and evaluation on the basis of recognizing symptoms and signs. Student will be qualified for diagnostic procedure and care, as well as management of team for health care in hospital conditions.

Syllabus

Theoretical instruction:

Inroduction to subject. Principles of health care process in internal medicine. Hospitalization of internal patients. General problems of health care in internal medicine (problem of pain,limited mobility,disorientation). Health care within the framework of primary prevention. Specifics of nurses' interventions in the following areas:cardiology,pulmology,allergology and immunology,gastroenterology,hepatology,hematology,endocrinology,nephrology,rheumatology. Observing patients in order to survey needs for health care in the named areas of internal medicine. Ilnesses of respiratory system. Illnesses of cardiovascular system. Illnesses of haemopoietic system. Illnesses of digestive system. Endocrine disorder. Illnesses of urinary tract and locomotive disorders.

Practical teaching:

Practical application of diagnostic procedures in internal medicine(laboratory,radiologic,radioisotopic, ultrasound,endoscopic,CT,HMP). Practical application of therapeutic procedures in all areas of internal medicine. Admission of internal patient to hospital treatment. Family history. Observing patients,planning and realization of procedures in care. Work evaluation as basis for new planning of health care. Procedure of releasing patients from hospital. Application of measures for personal protection.

Literature:

1. **Djurica S.:Interna medicina;Visa medicinska skola,Beograd,2000.**
2. **Corluka V.i sar.:Standardizovane aktivnosti zdravstvene nege i zbrinjavanje bolesnika-vodic za medicinske sestre,Licej,Beograd,2007.**
3. **Manojlovic D.:Interna medicina,Zavod za udzbenike,Beograd,2006.**
4. **Manojlovic S,Tesic M,Radojevic D,Milinovic S:Standardizovane aktivnosti medicinskih sestara u endokrinologiji i endokrinoj hirurgiji,Licej,Beograd,2010.**
5. **Manojlovic S,Matic C:Zdravstvena nega u internoj medicini,Zavod za udzbenike,Beograd,2010.**

Number of active teaching classes: 60				Other classes:
Lectures: 3x15	Practical classes: 4x15	Other teaching forms: 7x15	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)			
Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Written exam	-
Colloquium 1	20	Oral exam	30
Colloquium 2	20		
Practical work	20		
Assessment methods:			

Study programme: Health care

Type and Level of Studies:Basic professional studies,first level

Course code and title: Internal medicine with health care 2

Teacher (Surname, middle initial, name): Micic S.Olivera

Course status: Compulsory

Number of ECTS credits: 5

Prerequisites: none

Course aims:

Getting knowledge and skills in the domain of health care in internal medicine on a higher level of independence of professional nurse,which means quality work for complex procedures. Gaining knowledge about prevention,recognizing symptoms and signs of vitally endangered states of patients and states that ask for specific treatment in health care of internal medicine. Gaining specific knowledge in diagnostics,curing and treatment in all areas of urgent internal medicine. Viewing needs for health care with the aim of planning,realization and evaluation.

Learning outcomes:

Students will be able to master skills of diagnostic procedures,treatment and leading the team for health care in internal medicine in emergency conditions and specific units for intensive care,as well as for recognizing conditions and taking over appropriate procedures with life-threatening patient.

Syllabus

Theoretical instruction:

Specifics of admission of life-threatening patient in the areas of internal medicine (cardiology,pulmology,endocrinology,gastroenterology and hepatology,nephrology). Nurse's interventions in invasive diagnostics and therapy in cardiology and pulmology. Specifics in treatments of patients with hypoglycaemia,diabetes ketoacidosis and coma,thyroatoxic crisis. Endoscopic methods of examination in gastroenterology (peroral and peranal endoscopy). Haemodialysis,kidney transplant,peritoneal dialysis. Nurse's interventions at haemotherapy application,prevention of complications. Bone marrow transplant-nurse's interventions. Urgent conditions in all areas of internal medicine.

Practical teaching:

Specifics of patients treatment in the intensive care unit-coronary unit,pulmological unit,metabolical unit. Preparation of patients and assistance during cardiac catheterization,hysography,endomiocard biopsy,stent installation,percutaneous coronar intervention in acute myocardial infarction (PCI). Preparation of patients,material and assistance during bronchoscopy, mediastinoscopy and biopsy of lungs. Management of patients with hypoglycaemia,diabetes ketoacidosis and coma,thyroatoxic crisis. Preparation of patients for peroral and peranal endoscopy. Inroduction with the center for haemodialysis,application of haemodialysis,preparation of patients for kidney transplant. Preparation of peritoneal dialysis. Preparation of patients for haemotherapy. Preparation of patients,material for bone marrow transplant.

Literature:

1. **Manojlovic D:Interna medicina,Zavod za udzbenike,Beograd,2006.**
2. **Manojlovic S:Hitna stanja u internoj medicini;Zavod za udzbenike,Beograd,2011.**
3. **Manojlovic S:Endoskopija u internoj medicini;Zavod za udzbenike,Beograd,2011.**
4. **Ristic I:Urgentna medicina,Obelezja,Beograd,2008.**

Number of active teaching classes: 60				Other classes: 10x15
Lectures: 3x15	Practical classes: 2x15	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Written exam	-
Colloquium 1	20	Oral exam	30

Colloquium 2	20		
Practical work	20		
Assessment methods:			

Study programme: Health care

Type and Level of Studies:Basic professional studies,first level of studies

Course code and title: Legal aspects of health care

Teacher (Surname, middle initial, name): Panic Lj.Miodrag

Course status: Compulsory

Number of ECTS credits: 5

Prerequisites: none

Course aims:
Introducing students to the law in the domain of health and medical care,mastering basic concepts of law and by-laws related to the health system.

Learning outcomes:
Student will be able to apply law and by-laws in the domain of health and health protection, get to know basic principles,regulations and standards of health services,get to know patients' rights as users of health services.

Syllabus
Theoretical instruction:
Legal basics of health protection in Serbia. The most important law regulations in health service. Role of the state in health protection. Supervision of the work of health services-regulations. General administrative procedure and administrative dispute-achievement of protection rights by court case.

Literature:
1. **Prof.Dr Dragan Bataveljic,prof.dr Marko Vojvodic-Zakonodavstvo,VZSSSS,Visan,2009.**
2. **Timotic B,Andjelski H.-Zdravstveno zakonodavstvo,Elit-Medica,Beograd,2004.**
3. **Constitution of Serbia;laws and by-laws related to health protection;international conventions that were ratified by Serbia in the domain of public health service**

Number of active teaching classes:				Other classes: 6x15
Lectures: 2x15	Practical classes:	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	20	Written exam	-
Practical classes	-	Oral exam	50
Colloquia	15		
Seminar papers	15		

Assessment methods:

Study programme: Health care

Type and Level of Studies: Basic professional studies

Course code and title: Medical equipment,installations and spaces

Teacher (Surname, middle initial, name): Radosavljevic D.Damnjan,Cirovic M.Ivana,Milovanovic N.Vidoje

Course status: Compulsory

Number of ECTS credits: 5

Prerequisites: none

Course aims:

Gaining professional knowledge related to characteristics,principles,manners and conditions of use,application and management of medical equipment,instruments,devices,installations and space. Ability of assessment and critical understanding of relations between a man and functional work place which is with its equipment,installations and organization,designed for particular use.

Learning outcomes:

Having professional knowledge and abilities of valuing and critical understanding of characteristics and principles,methods and conditions of use,application and management of medical equipment,installations and space. Ability to regularly and safely use medical equipment and istallations in the functional space,as well as to solve complex problems in unpredictable situations.

Syllabus

Theoretical instruction:

Medical equipment:

Biomedical instruments,cooperation between medical and technical experts. Electrocardyography. Electroencephalography. Electromyography. Ultrasound. Pacemakers. Nuclear magnetic resonance. Scanners. Protection of patients and medical staff from electric shock and electricity effect.

Installations:

Heating in medical rooms:Heating substation,Heating objects,Cauldrons.

Air-conditioning of medical rooms:Types of air-conditioning and chambers;Natural and artificial air-conditioning.

Technical gasses:General characteristics of gasses;Classification of gasses;Gasses that are used in medicine;Physical and chemical characteristics of gasses;Storage and transport;Systems for provision of compressed air and vacuum plant;Systems for medical,energetic and technical gasses.

Firefighting:

Water hydrants and lead door system.

Medical spaces:

Structure and organization of medical spaces. Multidisciplinary approach in the relationship between a man and space. Ergonomy,humane engineering: synthesis of psychology,sociology,anthropology,physiology and medicine with engineering. Spaces adjusted to the needs of working process and anatomic,physiological and psychological characteristics of employees and users. Anthropological measures. Relationsip :user-work place. Working scheme of space. Arrangement and position of work- places and relation with other work-places. National standards and regulations. Space zones:entrant,working,communicative,hygienic. Taking measures and equipping of space for handicapped people. Movable and immovable parts of the space. Hierarchy of the environment. Spacial levels. Spheres of communication:intimate,personal,social and public. Multifunctionality of space.

Practical teaching:

Comparative theoretical analysis of functional medical spaces which are with their equipment,installations and organization, designed for particular purpose. Writing seminar papers on the given topic according to the given model.

Literature:

1. **Stojanovic G.(2007.)Elektronski medicinski uredjaji,Novi Sad:Fakultet tehnickih nauka**
2. **Surlan A.(1982.)Medicinski elektronski instrumenti.Sarajevo:Svjetlost**
3. **Todorovic B.(2005.)Projektovanje postrojenja za centralno grejanje.Beograd;Masinski fakultet**

4. **Grupa autora(1974.)Tehnicki gasovi.Beograd;Tehnogas**
5. **Panero J.,Zelnik M.(2009.)Antropoloske mere i enterijer.Beograd:Gradjevinska knjiga**
6. **Balzanero D.(2003.)Operacioni blok-projektovanje,programiranje,izgradnja**
7. **Juracic D.,Stamenovic B.(1997.)O prostorima lecenja-centri dnevne nege.Beograd:Zaduzbina Andrejevic**
8. **Juracic D.(2004.)Zdravstvene zgrade.Zagreb:Tehnicka knjiga**

Number of active teaching classes: 60				Other classes: 6x15
Lectures: 3x15	Practical classes: 3x15	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Written exam	20
Practical classes	-	Oral exam	20
Colloquia	30		
Seminar papers	20		

Assessment methods:

Study programme: Health care

Type and Level of Studies:Basic professional studies

Course code and title: Medical waste

Teacher (Surname, middle initial, name): Trumbulovic Bujic M.Ljiljana,Aksentijevic M.Snezana

Course status: Elective

Number of ECTS credits:5

Prerequisites: none

Course aims:

Elementary aim of the subject is achieving competence and skills from the domain of medical waste management and to introduce students during lectures with techniques of management,processes of sorting,modification and treatment of medical waste and procedures of health protection of health workers and users of health services from dangerous substances.

Learning outcomes:

Student should be capable of gaining professional competence for organization and planning of all needed activities in the domain of management of medical waste in practice,risk in health institutions,to develop innovative approach in thinking with the aim of protection of health at work.

Syllabus

Theoretical instruction:

Defining medical waste,Cathegories of medical waste. Dangerous medical waste. Pharmaceutical waste. Radioactive waste from the health sector. Cytostatic waste. Pathoanatomical waste. Non-dangerous waste. Estimation of quantity of waste that is being made. Hierarchy in medical waste management. Handling medical waste. Sorting medical waste. Collecting, labeling,transport and temporary storaging of medical waste. Transport of medical waste. Final storaging of medical waste. Putting off waste on landfills. Sterilization of waste in autoclaves. Burning. Management system of medical waste. Accidents,overflowing,disinfections and measures applied in cases of an overflow of infectuous medical waste. Risk assessment in the context of medical waste.

Practical teaching:

International and national legislature in the domain of disposition of dangerous medical waste. Regulations for medical waste management. Current situation in the country related to the management of medical waste. Generators of medical waste. Measures for establishment of infective medical waste system. Preventing inception and spreading of intrahospital infections. Handling medical waste and ilustration of elementary safety measures. Demonstration of practical work in health institution.

Presentation of seminar papers.

Literature:

1. **Lj.Trumbulovic:Upravljanje otpadom,pisana predavanja,VPTS,Uzice,2016.**
2. **Gledovic Z.i saradnici:Epidemiologija,Medicinski fakultet,Univerzitet u Beogradu,2006.**
3. **Zakon o zdravstvenoj zastiti (Sluzbeni glasnik RS,br 107/05**
4. **Zakon o lekovima i medicinskim proizvodima (Sluzbeni glasnik RS,br 84/04,85/05)**
5. **Zakon o prevozu opasnih materija (Sluzbeni glasnik RS,br 36/2009)**
6. **V.Djukic:Osnovi i zastita zivotne sredine,Panevropski univerzitet,Banja Luka,2008.**
7. **Nacionalni vodic sa prirucnicima-Bezbedno upravljanje medicinskim otpadom,Ministarstvo zdravlja,Republika Srbija,2009.,Beograd**
8. **Zakon o upravljanju otpadom,Sluzbeni glasnik RS br 36/2009,88/2010,14/2016**

Number of active teaching classes: 60				Other classes: 7x15
Lectures: 2x15	Practical classes: 2x15	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**

Activity during lectures	5	Written exam	-
Practical classes	5	Oral exam	50
Colloquia	10		
Seminar papers	30		
Assessment methods:			

Study programme: Health care

Type and Level of Studies:basic professional studies

Course code and title: Microbiology

Teacher (Surname, middle initial, name): Djordjevic Miloradovic V.Jasminka

Course status: Compulsory

Number of ECTS credits: 6

Prerequisites: none

Course aims:

To teach students basics of structure,systematics,metabolism and genetics of microorganisms,as well as basics of relations of microorganisms towards ecological factors. Emphasis will be on importance of microorganisms in the process of production and pollution of water and food, as well as the most important microorganisms,causers of human illnesses.

Learning outcomes:

Students should gain knowledge from basic microbiology,microorganisms of provisions and pathogenic microorganisms.

Syllabus

Theoretical instruction:

Introduction to microbiology. Discovery of microorganisms. Introduction to the structure of bacterial cell. Ultrastructure of bacterial cell(external structure,structure of cytoplasm). General information about systematics of microorganisms. Discovery, characteristics and representatives of viruses and Archea. Brief systematics of Eubacteria. Brief systematics of microscopic algae,first animals and fungi. Genetics of microorganisms. Metabolizing mechanisms of genetic material of bacteria. Recombinant DNA and genetic engineering. Feeding of microorganisms. Cell membrane concept and transport of matter. Types of microorganisms' feeding. Microorganisms' metabolism. Fermentation. Breathing. Biosynthesis of special matters of microbial cell. Ecology of microorganisms. Concept and division of ecological members. Relation of microorganisms towards some ecological factors. Microorganisms and food. Role and importance of microorganisms in milk and milk products,meat and meat products,fruit and vegetables,confectionery products,flour and other mill and bakery products. Pollution of food and food poisoning. The most important microorganisms that cause bacteriosis,micosis and virosis in humans.

Practical teaching:

Introduction to work in microbiological laboratory. Morphology of bacteria. Simple and complex coloring of bacteria. Coloring according to Gramm. Morphology of mould. Observation and description of mould organs. Indirect method of agar plates for assessment of total number of microorganisms. Assessment of bacteria and mould in the air of offices and in polluted environment by method of sedimentation. Assessment of the most important pathogen bacteria E.Coli,Salmonella,Schigella,Bacillus,Clostridium.

Literature:

1. **Vlahovic.M:Medicinska mikrobiologija,Beograd,2005.**
2. **Havec,Melnik,Aldelbers:Medicinska mikrobiologija,Beograd,2005.**
3. **Simic D.:Opsta mikrobiologija,Naucna knjiga,Beograd,2000.**
4. **Jemcev-Djuric:Mikrobiologija,Vojno-izdavacki zavod,Beograd,2002.**
5. **Djordjevic-Miloradovic:Mikrobiologija hrane,autorizovana skripta,VTSSS,Pozarevac,2005.**

Number of active teaching classes: 60				Other classes:
Lectures: 2x15=30	Practical classes: 2x15=30	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**

Activity during lectures	5	Written exam	-
Practical classes	5	Oral exam	50
Colloquia	40		
Seminar papers	-		
Assessment methods: Assessment methods can vary. Those given in the table are some options.			

Study programme: Health care

Type and Level of Studies:Basic professional studies,first level

Course code and title: Neurology with health care

Teacher (Surname, middle initial, name): Jovicevic M.Slobodan

Course status: Elective

Number of ECTS credits:7

Prerequisites: none

Course aims:

Students will gain certain knowledge about neurology in order to be capable to either independently or in collaboration with team members apply gained knowledge in prevention,curing,treatment and rehabilitation of patients with neurological illnesses in out-patient or clinical and hospital health protection.

Learning outcomes:

Students will be able to apply gained knowledge,practical skills in observation of patients,as well as treatment,curing and rehabilitation. Students will be capable of establishing patients' needs for treatment at neurological illnesses,method procedures in health care process.

Syllabus

Theoretical instruction:

Introduction to health care in neurology. Ethiology and classification of neurological illnesses. Principles of care in neurology-all levels of health protection. Admission and release of patients from hospital, urgent admission. Neurological intensive care. Documentation of health care in neurology. Specifics of communication in neurology. Establishment of the first contact. Assessment of patient's condition. Establishment of the treatment goals. Making treatment programms. Evaluation of treatment. Introduction to the neurological illnesses. Importance of nurses' intervention in preparation of patients for carrying out diagnostic and therapeutic procedures. Education of patients and family members for patient's treatment in home conditions. Basics of functional anatomy of nervous system. Corellative neuroanatomy and functional neurology. Syndroms of neurological injuries. Diagnostic methods in neurology. Injuries of cranial nerves. Consciousness and consciousness disorder. Epilepsy. Sleep and sleep disorder. Craniocerebral injuries. Spinal injuries. Intercranial tumours. Tumours in vertebral canal. Tumours in spinal canal. Cerebrovascular diseases. Diseases of extrapyramidal system. Illnesses of neural roots. Illnesses of neural webs and particular nerves. Polyneuropathy and polyneuritis. Inflammatory illnesses of nervous system. Dementia. Neurological illnesses in the age of development.

Practical teaching:

Basic principles of neurological protection. Organization of modern neurological service. Triage of neurological patients,respecting criteria of progressive care with special emphasis on the vitally imperilled patients. Impartial assessment of state of consciousness,respecting standardized Glasgow coma scale. Peculiarities of neurological patients' treatment. Establishing contact with neurological patient. Observation and assessment of the condition of motor functions. Prevention and treatment of decubitus.Keeping documentation of the process of health care. Taking part in visits. Establishing care needs. Application of diagnostic and therapeutic procedures.

Literature:

1. **Maksimovic M.:Zdravstvena nega u neurologiji,VZSSS,Beograd,2009.**
2. **KonjikusicV.,Kocev N.:Zdravstvena nega u procesu rehabilitacije,Cigoja,Beograd,2005.**
3. **Levic Z.:Osnovi savremene neurologije,Zavod za udzbenike,beograd,2005.**
4. **Kostic V.:Neurologija,Medicinski fakultet,Beograd,2007.**

Number of active teaching classes:				Other classes:
Lectures: 3x15	Practical classes: 3x15	Other teaching forms:	Study research work:	7x15

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)			
Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Written exam	-
Practical classes	10	Oral exam	30
Colloquia	20		
Seminar papers	10		
Practical activities check	**20**		

Study programme: Health care

Type and Level of Studies:Basic professional studies,first level of studies

Course code and title: Nutrition and dietetics

Teacher (Surname, middle initial, name): Savic Bozovic Dara

Course status: Compulsory

Number of ECTS credits: 6

Prerequisites: none

Course aims:
Introducing students to importance that proper diet and nutritive therapy have in preserving and improving of health, as well as to the role of macro and micronutrients in an organism.

Learning outcomes:
Qualifying students to understand importance of proper nourishment,basics of nutritive therapy,to recognize and estimate consequences of inadequate input of macro and micronutrients and to know to suggest measures of prevention.

Syllabus
Theoretical instruction:
Introduction to nutrition. Recommendations in nutrition and their use. Food digestion and absorption. Macronutrients:fat,carbohydrates,proteins (role in organism,daily needs,sources,consequences of insufficient an overly input). Liposoluble and hydrosoluble vitamins. Mineral substances. Water and monovalent elektrolytes. Introduction to dietetics and medical nutritive theory (MNT). MNT at deficiency of macronutrients (proteins,fat,carbohydrates). MNT at nutritive anaemia, rickets. MNT at scurvy,pellagra,atiaminosis. MNT at avitaminosis of vitamin A. MNT at overweight,nourishment disorders (anorexia,bulimia). MNT at diseases of oral cavity,pharynx and gullet,gaster. MNT for constipation,diarrheal syndrome and indigestion. MNT at diseases of small intestine. MNT at diseases of colon. MNT at diseases of liver and gallbladder. MNT at pancreas diseases.

Practical teaching:
Assessment of energetic needs. Assessment of energetic needs in specific activities. Calculation of biological and energetic value of food and drinks. Making diet programs. Basic characteristics of nutrients.

Literature:

1. **Novakovic B.,Mirosavljev M.:Higijena ishrane,Medicinski fakultet,Novi Sad,2002.**
2. **Kocijancic R.,main editor:Higijena,Zavod za udzbenike i nastavna sredstva,Beograd,2002.**
3. **Vasiljevic N.,main editor:Praktikum iz higijene i medicinske ekologije za studente medicine;Medicinski fakultet,Beograd,2010.**
4. **Suzic S.,Mitrovic D.,Djuric D;Praktikum za medicinsku fiziologiju sa radnom sveskom II deo(IV semestar). Medicinski fakultet univerziteta u Beogradu,Beograd,2008.**
5. **Tables of groceries' structure**

Number of active teaching classes: 60				Other classes:
Lectures: 2x15	Practical classes: 2x15	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Written exam	-
Practical classes	10	Oral exam	30
Colloquia	30		
Seminar papers	20		

Assessment methods:

Study programme: Health care

Type and Level of Studies:Basic professional studies,first level

Course code and title: Palliative medicine with health care

Teacher (Surname, middle initial, name): Pavic M. Sladjana

Course status: Elective

Number of ECTS credits:7

Prerequisites: none

Course aims:

Introducing students to theory and practice of palliative care of patients,gaining knowledge,skills and attitudes needed for professional and emotional approach to the patient during palliative treatment,methods of curing and care,organization of health care in oncological units.

Learning outcomes:

Student is going to understand the nature of palliative treatment and gain personal attitudes about dying and mourning,master pharmacological and non-pharmacological measures for soothing symptoms of illnesses,measures for coordinating treatment with needs and wishes of patients,communication skills with patients and their families. Elective subject is mostly directed towards practical use of gained knowledge about health care of patients,with special emphasis to complications that occur during various procedures in palliative treatment of patients.

Syllabus

Theoretical instruction:

History and development of palliative treatment in the world and in Serbia. Multidisciplinary,interdisciplinary and ethic principles of palliative treatment. Specifics of palliative treatment of children. Principles of symptom control. Emergency conditions in palliative treatment. Algorhythms of decubitus,stoma,skin and mucosa and other surgery procedures through nurses' procedures. Preparations of giving and protection from antineoplastic drugs. Surmounting radiotherapeutic procedures and health care organization during irradiation of patients. Mastering rehabilitation procedures. Introducing and mastering application of computer system in administrative nurse procedures.

Practical teaching:

Inroducing students to the health care organization in surgery,radiotherapeutic and internal units,ways of preserving,preparation and application of chemotherapy,procedures in case of complications during use of drugs. Inroduction to the regulations about safe management of cytostatic drugs and radiation,with special forms of rehabilitation,psycho-social condition of a patient and family. Student will master administrative procedures related to nurses' vocation and information system of patients' data processing. Treatment of patients in terminal stadium. Preparation and treatment of surgery-oncologic patients and patients on radiation. Preparation and application of antineoplastic drugs. Application of early and late rehabilitation. Treatment of patients in intensive unit. Preparation and treatment of patients during autologous transplant of peripheral progenitor cells. Basic principles of health care organization of oncologic patient.

Literature:

1. **Glisic R.:Zdravstvena nega u hirurgiji,poglavlje Palijativna nega,Cicero,Beograd,2011.**
2. **Jovanovic D.:Osnovi onkologije i palijativna nega onkoloskih bolesnika,Medicinski fakultet,Novi Sad,2008.**
3. **Downing J. I sar.:Palijativna medicina-prirucnik za studente medicine,Medicinski fakultet Beograd,2012.**
4. **Boskovic S.:Zdravstvena nega u Onkologiji,poglavlje-Palijativno zbrinjavanje,Finegraf,Beograd, 2012.**

Number of active teaching classes: 60				Other classes: 7x15
Lectures: 3x15	Practical classes: 3x15	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)			
Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Written exam	-
Practical classes	10	Oral exam	30
Colloquia	20		
Seminar papers	10		
Practice check	**20**		

Study programme: Health care

Type and Level of Studies:Basic professional studies

Course code and title:Pediatrics with health care

Teacher (Surname, middle initial, name): Savic Bozovic S.Dara

Course status: Compulsory

Number of ECTS credits: 6

Prerequisites: none

Course aims:

1.Students should gain theoretical knowledge and master skills of nursing children.

2.Introducing and understanding organizational concept,structure,culture and changes in institutions for health care.

Learning outcomes:

Gained knowledge and qualification of students for continued,extensive and complete physical protection of children,as well as necessary treatment for life maintenance and rehabilitation of vitally endangered children.

Syllabus

Theoretical instruction:

Elements of system of children's health protection. Modern health concept. Natural and artificial nutrition. Treatment of ill child. Specifics of health care of prematurely born child. Risk management in therapy application. Health care of children with following diseases of : respiratory,cardiovascular,neurologic system, kidney,urinary and endocryne system.

Practical teaching:

Institutions for children's health care. Parameters for growth, care of healthy child. Treatment of a child in hospital conditions. Role and responsibility of a nurse in pediatric department of intensive care. Transport,admission and treatment of vitally endangered child. Treatment of a newborn in incubator. Treatment plan of a dehydrated child and a child with disordered gas exchange. Uninvasive and invasive monitoring of children with inborn heart failures. Treatment plan for children with symptoms related to chemotherapy. Treatment of children with haemophilia and blood illnesses. Treatment of comatose patient. Parents training for disease control in home conditions.

Literature:

1. **Marinkovic Lj.:Zdravstvena nega u pedijatriji;G.A.D.,Beograd,2007.**
2. **Zivanovic V.:Zastita zdravlja zene i deteta;autorsko izdanje;Tipo stampa;Beograd,2009.**

Number of active teaching classes: 60				Other classes: 10x15
Lectures: 3x15	Practical classes: 3x15	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Written exam	-
Practical classes	25	Oral exam	30
Colloquia	25		
Seminar papers	10		

Assessment methods:

Study programme: Health care

Type and Level of Studies:Basic professional studies,first level

Course code and title: Pharmacology

Teacher (Surname, middle initial, name):Milicevic V.Ivana

Course status: Compulsory

Number of ECTS credits: 6

Prerequisites: none

Course aims:

Gaining elementary knowledge from the domain of modern pharmacology and pharmacotherapy with their basic principles,as well as principles of manifestation of pharmacological effects of some groups of drugs.Recognizing expected and unwanted effects of certain groups of drugs.

Learning outcomes:

Students will gain elementary knowledge from the domain of modern pharmacology and pharmacotherapy and they will be able to monitor expected,unexpected and unwanted effects of drugs. Students will develop awareness about place,importance and responsibility of professional nurse in therapeutic procedure.

Syllabus

Theoretical instruction:

General pharmacology:basic concept about a drug,drug origins. Basic forms of drugs. Pharmacokinetics of a drug. Use of drugs. Peculiarity of drug use with pregnant women,during lactation,with children and older people. Use of drugs at glomerulopnephritis and liver disease. Unwanted drug effects. Pharmacodynamics. Interaction of drugs. Special pharmacology: Pharmacology of autonomic nervous system;Pharmacology of central nervous system. Pain-killers,antipyretics,anti-inflammatory drugs and other similar drugs. Pharmacology of cardiovascular system. Pharmacology of hormones. Pharmacology of blood and tissues. Infusional therapy. Parenteral feeding. Pharmacology of respiratory system. Pharmacology of gastrointestinal tract. Antimicrobial therapy. Antiseptics and disinfectants. Immunomodulators and immunosupressant drugs. Chemotherapy of malignancies.

Practical teaching:

Basic princples of proper use of drugs. Preparation of drugs and dosage forms. Dosage ,dose intervals and calculation of dosage. Principles and techniques of intravenuous use of drugs. Role of a nurse in secure and efficient use of drugs. Infusional solutions-types,methods of preparation and use,unwanted effects. Compatibility of drugs with infusional solutions. Use of drugs with specific groups of patients (pregnant women,children,older people). The most common medicational mistakes (examples). Discovery and monitoring of unwanted drug effects. Form filling for unwanted drug effect. Medical database search. Presentation of seminar papers.

Literature:

1. **Varagic V.,Milosevic M.:Farmakologija,Elit medika,Beograd,2012.**
2. **Jankovic S.,Prostran M.,Todorovic Z.:Farmakologija i toksikologija,Medicinski fakultet,Kragujevac,2007.**
3. **Janet L.Stringer:Osnovni koncepti u farmakologiji,vodic za studente,Data status,Beograd,2008.**

Additional literature:

1.Bertram G.Katzung:Temeljna i klinicka farmakologija(hrvatski prevod),Medicinska naklada,Zagreb,2011.

Number of active teaching classes: 60				Other classes: 6x15
Lectures: 2x15	Practical classes: 2x15	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)			
Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Written exam	-
Practical classes	10	Oral exam	30
Colloquia	40		
Seminar papers	10		
Assessment methods:			

Study programme: Health care

Type and Level of Studies:basic professional studies

Course code and title: Physics with basics of radiology

Teacher (Surname, middle initial, name): Cetkovic S. Miloje

Course status: Compulsory

Number of ECTS credits: 6

Prerequisites: none

Course aims: Gaining elementary knowledge about physical legitimacies in biological systems,their physique and function,as well as use of different methods and techiques in medical diagnosis and therapy.

Learning outcomes: Student will get knowledge about physical basics of functions of some systems of human body(locomotive,cardiovascular,sense of hearing and sense of eyesight). They will master skills necessary for use with sophisticated methods in medical diagnosis and therapy.

Syllabus

Theoretical instruction:

1. Mechanics of locomotive system: Basics of mechanic size,Elements and functioning of locomotive system;aelastic and plastic deformities;
2. Mechanics of fluids:Ideal and real fluids;Surface strain;High elasticity and rheological models;Characteristics of biological fluids.
3. Acoustics and ultrasound:Oscillatory and wave movement;Characteristics of sound;Perception of sound;Characteristics of ultrasound;Use of ultrasound in medical diagnostics and therapy.
4. Thermodynamics :Thermodynamic systems and principles;Application in biological systems;
5. Transport processes: Heat spreading;Diffusion;Transport of the substance through cell membrane;
6. Electromagnetic phenomena: Electrostatics,Constant and alternating electricity,Physical basics of medical electronics
7. Elctromagnetic radiation:Non-ionizing and ionizing radiation;Physical characteristics of EM field,Sources of EM radiation;Harmful effects;Use in medicine
8. Optical radiation: IR-radiation (fundamentals of thermal radiation,harmul effects and protection,use);UV-radiation (sources,harmful effects and protection,use);VIS (fundamentals of geometric optics. Optical and electronic microscope. Photometric sizes. Perception of light.)
9. X-ray radiation: Spectras of x-ray;Interaction of x-rays with the substance,Physical fundamentals of x-ray diagnosis
10. Radio-active radiation: Characteristics of nucleus;Radioactive decay;Sources of radioactive radiation;Dosimetry of ionizing radiation in medical diagnosis and therapy.

Practical teaching:laboratory practices:

1. a)Assessment of the liquid density; b)Assessment of the surface strain of liquids
2. a)Assessment of the coefficient of viscosity of liquids;b)Determining volumetric flow of water
3. a)Assessment of the sound velocity;b)Assessment of the frequency of the sound
4. a)Assessment of the specific heat of solid corpus;b)Determining relative air humidity
5. a)Assessment of wavelength of light;b)Determining focal length of the lens;c)Microscope
6. a)Assessment of activity of RA source;b)Determining of equivalent dose of ionizing radiation;c)Determining coefficient of absorption of y-rays

Literature:

1. **Stankovic S.:Fizika ljudskog organizma,PMF,Novi Sad,2006.**
2. **Simonovic J.i dr.:Biofizika u medicini,Medicinska knjiga,Beograd,1997.**
3. **Cetkovic M.:Praktikum racunskih i laboratorijskih vezbanja iz fizike,Priboj,2013,**
4. **Lazarev S.:Osnovi biofizike i radiologije sa praktikumom,VTS,Sabac,2015.**

Number of active teaching classes: 60	Other classes:

Lectures: 30	Practical classes: 30	Other teaching forms:	Study research work:	
Teaching methods: Lectures, exercises, assignments, projects, consultations.				
Knowledge evaluation (maximum 100 points)				
Pre-exam obligations	**Points**	**Final exam**	**Points**	
Activity during lectures	10	Written exam	-	
Practical classes	6x5=30	Oral exam	30	
Colloquia	30			
Seminar papers				
Assessment methods:				

Study programme: Health care

Type and Level of Studies:Basic vocational studies

Course code and title: Physiology with basics of anatomy

Teacher (Surname, middle initial, name): Acimovic P. Milena

Course status: Compulsory

Number of ECTS credits: 7

Prerequisites: None

Course aims: The aim of the course is gaining knowledge about organs and systems of human body,understanding regular anatomic and histological structures and terms.The students would be able to attain knowledge about physiology of cells, tissues and the whole system of human body in order to recognize altered pathological functioning and regulation, as well as possibilities of treatment. They will understand the role of control mechanisms of organisms,recognise and understand regulatory systems inside human body.

Learning outcomes: Ability to define,understand,describe, integrate and reproduce terms related to regular anatomic and histological structures. After attending the course and passing the exam, the students are expected to have knowledge of certain part of medical nomenclature, can explain functioning of a single organ and system of organs,to recognise and understand integrated functions of several organs, as well as the role of controlling mechanisms of organism, to recognise and understand connection of regulatory systems inside the human body.

Syllabus

Theoretical instruction: Elementary anatomic terms.Areas and parts of body.Upper extremity.Bones,joints,muscles,blood vessels and nerves.Lower extremity.Bones,joints,muscles,blood vessels and nerves.Thorax.Division and contents of the chest cavity.Lungs and pleura.Heart.Organs of mediastinum.Abdomen.Division and contents of the abdomen.Peritoneum.Peritoneal cavity(liver, gizzard,milt,pancreas,small intestine and colon).Retroperitoneal space(kidney,adrenal gland,aorta,lower hollow vein,celiac web).Pelvis. Wall and contents.Urinary bladder,anus ,male and female genitals.Pelvis structures.Head and neck.Facial and head bones.Head and neck muscles.Large blood vessels and head and neck nerves.Central nerve system. Man's physiology.Transport through cell membrane.Intercellular communication.Physiology of excitement.Membrane potential of inaction.Action potential.Transmission of nerve impulse.Physiology of striated muscles. Nervous- muscle synapse.Morphophysiological characteristic of striated musculature.Physiology of smooth muscles.Specifics of physics of smooth muscular tissue,types,electric activity of smooth muscles,specifics of contractions. Organisation of central nervous system.Nerve cell.Hematoencephal barrier,spinal liquid,composition and role.Spinal cord.Extended spinal cord.Middle brain.Functional characteristics,reticulum cortical intercourse,decerebral rigidity and regulation of skeletal musculature tone.Cerebellum,structure and function.Midbrain.Hypothalamus.Vegetative nerve system.Basal gangliae.The corpse of the brain.Senses.Definition,importance and general principles of sensory systems.Sense of hearing and smell.Sense of sight.Perception of pain.Introduction reference to pathophysiology.

Practical teaching:Demonstration of all teaching units on anatomical models. Use of anatomical atlas.Video presentations. Membrane potentials and synaptic transmission. Patellar and pupilar reflex. Influence of different factors on muscular contraction. Concentration of haemoglobin,erythrocytes and leucocytes in human blood.Buffer capacity of plasma. Coagulation of blood. Discussion and analysis of chosen physiologic systems. E-studying.

Literature:

1. **Mihalj M.:Anatomija coveka;Zmajeva biblioteka izdanja,Novi Sad,2005.**
2. **Velickovic B.Dragana:Fiziologija;Medicinski fakultet,Univerzitet u Nisu,Galaksija,2013.**
3. **Milisavljevic M.i sar.:Klinicka anatomija,Nauka, Beograd,2004.**
4. **Despopoulos A.,Silbernagl S.:Fizioloski atlas u boji za studente medicine,Medicinski fakultet,Nis,2007.**

5. **Guuton A.C.,Hall J.E.:Medicinska fiziologija,11.izdanje;Savremena administracija,Beograd 2006.**				
Number of active teaching classes: 60				Other classes:
Lectures: 2x15	Practical classes: 4x15	Other teaching forms:	Study research work:	
Teaching methods: Lectures, exercises, assignments, projects, consultations.				
Knowledge evaluation (maximum 100 points)				
Pre-exam obligations	**Points**	**Final exam**	**Points**	
Activity during lectures	20	Written exam	-	
Practical classes	25	Oral exam	30	
Colloquia	25			
Seminar papers				
Assessment methods:				

Study programme: Health care

Type and Level of Studies:Basic professional studies,first level

Course code and title: Prevention and control of hospital infections

Teacher (Surname, middle initial, name): Milicevic V.Ivana

Course status: Compulsory

Number of ECTS credits: 6

Prerequisites: none

Course aims:

Gaining elementary knowledge about hospital infections and necessity of modern approach and supervision,early discovering,prevention and suppresion of infections in order to lessen frequency of morbidity,mortality and lowering costs of treatment in health institutions.

Learning outcomes:

Students will gain elementary knowledge about importance and measures for suppression hospital infections and the role of a nurse in the chain of organized supervision,prevention and suppression of hospital infections.

Syllabus

Theoretical instruction:

Introduction to hospital infections-definitions,principles of infection control. Administrative arrangement and legal regulations in the area of hospital infections. Disinfection and sterilization. Hands hygiene and personal protective equipment. Measures of isolation. Monitoring and suppression of epidemics. Classification of hospital infections according to anatomic localization. Prevention of infections of surgical site. Prevention of infections connected to intravenous therapy. Prevention of infections connected to catheterization of urinary tract. Prevention of hospital pneumonia. Prevention of infections caused by multiple resistant microorganisms. Prevention of infections caused by specific pathogens. Hepatitis that can be conveyed by blood and infections caused by HIV. Managing medical waste and other hospital services. Processing data about hospital infections.

Practical teaching:

Getting to know work and importance of Cabinet for hospital infections and role of a nurse in infection monitoring. Disinfection and sterilization. Sampling material for control of sterility and cleanliness. Hands hygiene and personal protective equipment. Prevention of infections during various nurse's procedures. Patient's isolation. Stimulation of health personnel to regularly carry out measures of prevention and suppression of infections. Collecting data about hospital infections. Thorough surveillance of hospital infections. Regular documentation keeping about infections.

Literature:

1. **Nizam Damani,Prirucnik o kontroli i prevenciji infekcija;Medicinska naklada,2015.**
2. **Bolnicke infekcije-definicije-Prirucnik 1,Institut za javno zdravlje Srbije »Dr Milan Jovanovic Batut«, 2008.**
3. **Bolnicke infekcije-epidemioloski nadzor-Prirucnik 2,Institut za javno zdravlje Srbije »Dr Milan Jovanovic Batut«,2008.**

Additional literature:

1. **Kathleen Motackiet all.An illustrated guide to infection control,ISBN:978-0-8261-0560-8,Springer Publishing Company,2011.**

Number of active teaching classes: 60				Other classes: 6x15
Lectures: 2x15	Practical classes: 2x15	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Written exam	-

Practical classes	10	Oral exam	30
Colloquia	40		
Seminar papers	10		
Assessment methods:			

Study programme: Health service

Type and Level of Studies:Basic professional studies

Course code and title: Primary health protection and health care

Teacher (Surname, middle initial, name): Lucic S.Gordana

Course status: Compulsory

Number of ECTS credits: 6

Prerequisites: none

Course aims:
Students will be introduced to organization and work of primary protection services and master knowledge and skills that are necessary for nurses' work in this area and their use on all levels (primary,secondary and tertiary)

Learning outcomes:
Students will be able to work in out-patient health care: work in dispensary activity of health institution, as well as in the field work:health care at home,work in the family and community on promotion of health and prevention of diseases.

Syllabus
Theoretical instruction:
Health protection and public health (strategy of public health in Serbia). Defining health care in primary health protection,necessity of collaboration of hospital and out-patient health protection. Work of a nurse in dispensary activity of health institution,gerontology institute,in family and community. Work of a center for preventive health services;importance of knowing the Calendar of public health. Counselling as a method of health education work,organization and work of Parenting school. Health education,activities for health promotion and prevention of diseases (MHNB,drug addiction…). Work with sensitive population groups (pregnant women,children,people with developing difficulties,invalids…)

Practical teaching:
Practical display of community,introduction to the work of some services of health institution,introduction to the work of polyvalent patronage service. Introduction to the work of gerontology institution,home treatment and tending people over the age of 65. Introduction to the work of Developing counselling agency and parenting school. Preparation for the patronage visit to various population groups (pregnant woman,newborn and woman in labour,little and pre-school child). For seminar papers,students have to present one family that they paid patronage visit to.

Literature:

1. **Sarenac D.,Zdravstvena nega u primarnoj zdravstvenoj zastiti;script (authorized lectures),Beograd,2010.**
2. **Gradski zavod za zastitu zdravlja:Vodic dobre prakse za rad u polivalentnoj patronaznoj sluzbi,UNICEF,Beograd,2004.**
3. **Kekus D.,Zdravstveno vaspitanje,autorsko izdanje,Beograd,2009.**
4. **UNICEF:Prirucnik za rad u zajednici sa porodicama dece sa smetnjama u razvoju,Beograd,2010.**
5. **»Promocija zdravlja i zdravstvenih stilova zivota u zajednici«-Prirucnik za zdravstvene radnike,zdravstvene saradnike i ostale profesionalce za rad u promociji zdravlja u zajednici;Projekat Ministarstva zdravlja Republike Srbije,Beograd,2006.**

Number of active teaching classes:				Other classes: 8x15
Lectures: 2x15	Practical classes: 2x15	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Written exam	-

Practical classes	20	Oral exam	30
Colloquia	20		
Seminar papers	10		
Activity during practice	**10**		

Study programme: Health care

Type and Level of Studies:Basic professional studies

Course code and title: Professional clinical practice 2

Teacher (Surname, middle initial, name): Micic S.Olivera

Course status: Compulsory

Number of ECTS credits: 4

Prerequisites: Realized Professional clinical practice 2

Course aims:

The aim of the professional practice is for student to practically apply gained knowledge,to achieve higher level of professional independence through well organized work and to master nurses' skills necessary for work of professional nurse.

Learning outcomes:

In accordance to set goals and predicted competences it enables training students for work in the domain of health care.

Syllabus

Theoretical instruction:

During professional practice 2,a student should improve knowledge and skills,gained during professional clinical practice 1. The contents of the professional practice includes:nurses' interventions during admission of patients into hospital,establishing interactive relationship with patients,monitoring vital functions,maintaining personal hygiene,preventing complications,setting to the right position and transfer,nutrition of patients,taking biological material for diagnostic procedures,preparation and application of ordinated therapy,placement and treatment of intravenous cannula,placement and monitoring of urinary catheter,derivation of clysis. Application of methods of health care processes:establishing health care needs,documenting activities,assessment of health care results. Admission of internal patient to hospital treatment. First contact and communication with patients. Specifics in implementation of health care in internal medicine domain (cardiology,pulmology,endocrinology,gastroenterology and hepatology,haematology,oncology,nephrology, alergology and immunology). Peculiarities in implementation diagnostic and therapeutic procedures. Nurses' interventions related to communication with internal patients. Documentation of the health care process. Planning and making programs and evaluation of program work. Application of injection therapy of sollutions and medicaments. Procedure of patients' dismissal. Application of self-protection measures.

Practical teaching:

Students have professional practice in reference health institutions of primary,secondary and tertiary protection,that the School has contract of cooperation with.

Number of active teaching classes: 15x27=405

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures		Written exam	
Practical classes		Oral exam	
Colloquia			
Seminar papers			

Assessment methods: Student has to keep Diary of practical practice,which is signed and certified by a mentor

and the School’s professor. Professional practice is graded descriptively: “very successfully realized”,”successfully realized” and “not realized”. Mark is given according to the regular appearance on professional practice and levels of mastered skills,and on the basis of mentor’s opinion.

Study programme: Health care

Type and Level of Studies:Basic professional studies

Course code and title: Professional clinical practice

Teacher (Surname, middle initial, name): Gordana S.Lucic

Course status: Compulsory

Number of ECTS credits: 4

Prerequisites: none

Course aims:
Aim of professional practice is for student to apply gained knowledge,to achieve higher level of professional independence and master nurses' skills through well organized work.

Learning outcomes:
In accordance with set goals and predicted competences,outcomes follow the contents of professionally applicable subject Process of health care. It provides qualification of students for work in the field of process of health care.

Syllabus
Practical teaching:
Student should gain knowledge and ability to apply certain nurses' interventions in the process of health care of patients. Contents of professional practice includes following:nurses' interventions during patients'admission,establishment of interactive relationship with patients;monitoring vital functions;maintaining personal hygiene;preventing complications;appropriate positioning and transfer;nourishment of patients (per os,nasogastric tube,enteral);sampling biologic material for diagnostic procedures (blood,urin,sputum,feces);preparation and application of ordered therapy;placement and care of intravenous cannula;placement,monitoring and care of urinary catheter;drawing out clysis. Application of methods of health care processes:establishing needs of health care;documentation of activities;evaluation of health care outcomes. Admission of patients to hospital treatment. First contact and communication with patients. Specifics in the process of health care implementation. Specifics in the diagnostic and therapeutic procedures. Documentation of health care procedures.
Structure of professional practice:
Student performs professional practice in reference health institutions of secondary and tertiary protection,that the School has cooperation agreement with.

Number of active teaching classes: 15x27=405				Other classes:
Lectures:	Practical classes:	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.
In the realization of professional practice all teaching methods are applied. Students will work in small groups,demonstrate,practice,take part in creative workshops…

Assesment of knowledge:
Student must keep a Diary of professional practice,that is signed certified by mentor and the School's professor.

Professional practice is graded descriptively-“very successfully realized”/”successfully realized” or “not realized”. The grade is given on account of regular attendance to professional practice and level of mastered skills.

Study programme: Health care

Type and Level of Studies:Basic professional studies, first level

Course code and title: Psychology and mental health

Teacher (Surname, middle initial, name): Radomirovic B.Vojko

Course status: Compulsory

Number of ECTS credits: 6

Prerequisites: none

Course aims:

Gaining elementary knowledge about psychology and mental health,psychological functions and characteristics,as well as applied fields of psychology relevant for work in health service, such as areas of health psychology,psychology of people with disabilities,psychology of stress etc.,which represents theoretical basis for gaining professional skills in the field of health service.

Learning outcomes:

According to gained knowledge,students will improve undersatnding patients' personalities,mental health phenomenon,psychological aspects of diseases,and all in order to achieve better communication,colaboration and holistic approach in therapeutic process.

Syllabus

Theoretical instruction:

Programme includes introduction to psychology,its methods and fields of application. Areas of cognitive psychology and intelligence are analyzed,as well as affective processes,conative functions,area of personality development,socialization,social behaviour,forming attitude and values. The other part includes applied areas of psychology such as clinical psychology and naturalistic methods of assesment(interview,observation),area of health psychology,especially relationship between health worker and patient,team work,attitude towards diseases,treatment,hospitalization,psychology of pain and stress. Finally,psychological aspects of physical disabilities are processed.

Subject and theoretical basics of metal hygiene;Prevention of mental disorders;Mental hygiene of whole human life circle:Birth and childhood,Adolescence;Grown-up period;Old age. Modern problems of living:Alienation;City life;Rural life;Problems of nourishment;Physical activities;Life crisis;Stress and combustion syndrome;Emergency situations;Refugee.

Social pathology and maladaptive behaviours:Marginalized groups;Illegitimacy;Domestic violence;Alcoholism;Drug addiction;Prostitution;Religious sects;Pathological gambling;Suicidality;New forms of addictions;Mentally-hygienic approach to man:Health and sickness;Dying;Dehumanization and humanization of relations;Universal protection of mental health.

Practical teaching:

Contents coordinated with theoretical teaching,are going to be realized in relevant institutions and communities.

Literature:

1. **Dzamonja Ignjatovic T.:Uvod u psihologiju sa zdravstvenom psihologijom,Ekscelzior,Beograd,2006.**
2. **Simic M.,Kovacevic K.:Mentalna higijena,Beograd,2004.**
3. **Berger D.:Zdravstvena psihologija;Drustvo psihologa Srbije,Centar za primenjenu psihologiju,Beograd,2002.**

Number of active teaching classes: 60				Other classes: 6x15
Lectures: 2x15	Practical classes: 2x15	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**

Activity during lectures	10	Written exam	-
Practical classes	10	Oral exam	30
Colloquia	20		
Seminar papers	30		
Assessment methods:			

Study programme: Health Care

Type and level of studies: Undergraduate Vocational Studies

Course title: Russian 1

Teacher: Terzić V. Svetlana

Course status: Elective

Number of ECTS: 5

Prerequisites: None

Course aim: Teaching students how to use specialized literature relating to a specific vocational area; developing students' language skills (reading, translation, conversation); combining lexical and grammatical structures. Developing reading comprehension skills and teaching students how to use bilingual technical dictionaries. Developing text analysis skills, as well as precise and concise communication skills. Increasing public awareness of the importance of being familiar with fundamental concepts of health care using profession-specific texts.

Course outcomes: Providing continuous foreign language education upon high school completion. Developing communication skills and the skills that will enable students to cooperate with the immediate social and international environment. Acquiring knowledge and developing skills necessary for the successful use of the Russian language for the purpose of keeping pace with latest innovations and using them in practice. Students master vocabulary for specific purposes, can use specialized literature and can communicate successfully in Russian. Special emphasis is placed on using the information available on the Internet. Students use specialized literature to prepare final theses.
Students use Russian successfully in oral and written communication in every-day situations.

Syllabus:

Theoretical instruction:
The syllabus is divided into two, mutually interrelated parts. The first one comprises LSP texts, which will introduce students to specific vocabulary relating to mechanical engineering They will use this vocabulary in speaking activities about vocation-related topics. The other part comprises phonetics and grammar, necessary for developing reading comprehension skills, as well as listening comprehension skills. As for phonetics, special attention is paid to the correct pronunciation of soft consonants and iotified vowels. As for grammar, students will learn types of nouns, comparison of adjectives, numbers, and verbs of movement.

Practical instruction:
Students master specific medicine-related vocabulary.

Literature:

1. Marojević, Radmilo, 1983, Gramatika ruskog jezika, Beograd, Zavod za udžbenike i nastavna sredstva
2. Piper, Predrag, Gramatika ruskog jezika, Zavet, Beograd, 2005.
3. Partina A.S. Архитектурные термины, Стройиздат, Moskva, 1994.

Number of active teaching classes: 60				Other classes:
Lectures: 2x15=30	Practical classes: 2x15=30	Other forms of instruction:	Research study:	

Teaching methods: Monologue and dialogue.

Knowledge evaluation (maximum number of points: 100)

Pre-exam obligations	**Points: 70**	**Final exam**	**Points: 30**
Activity during lectures	10	-	-
Practical classes	-	Oral exam	30
Colloquia	60	-	-
Seminar papers	-	-	-

Study programme: Health Care

Type and level of studies: Undergraduate Vocational Studies

Course title: Russian 2

Teacher: Terzić V. Svetlana

Course status: Elective

Number of ECTS: 5

Prerequisites: Passed examination in Russian 1.

Course aim: Teaching students how to use specialized literature relating to a specific scientific discipline; developing students' language skills (reading, translation, conversation); combining lexical and grammatical structures. Increasing public awareness of the importance of health care using specialized texts.

Course outcomes: Students can use the Russian language successfully. They will develop communication skills that will enable them to cooperate with the immediate social and international environment.

Syllabus:

Theoretical instruction:

The syllabus is divided into two, mutually interrelated parts. The first one comprises LSP texts, which will introduce students to specific vocabulary relating to mechanical engineering They will use this vocabulary in speaking activities about vocation-related topics. The other part comprises phonetics and grammar, necessary for developing reading comprehension skills, as well as listening comprehension skills. As for phonetics, special attention is paid to the correct pronunciation of soft consonants and iotified vowels. As for grammar, students will learn about adverbs, imperative, participles.

Practical classes:

Listening exercises to practise coping with unfamiliar situations, using specific, health-care vocabulary. Talking about every-day topics relating to health care.

Literature:

1. Marojević, Radmilo, 1983, Gramatika ruskog jezika, Beograd, Zavod za udžbenike i nastavna sredstva
2. Piper, Predrag, Gramatika ruskog jeyika, Yavet, Beograd, 2005.
3. Vera Grubetić i Ljubica Nestorov, Ruski jezik za medicinare, stomatologe, veterinare, farmaceute i defektologe, Naučna knjiga, Beograd, 1988.

Number of active teaching classes: 60				Other classes:
Lectures: 2x15=30	Practical classes: 2x15=30	Other forms of instruction:	Research study:	

Teaching methods: Monologue and dialogue-based methods.

Knowledge evaluation (maximum number of points: 100)

Pre-exam obligations	**Points: 70**	**Final exam**	**Points: 30**
Active participation during lectures	10		-
Practical classes		Oral exam	30
Colloquia	60	-	-
Seminar papers		-	-

Study programme: Health care

Type and Level of Studies:Basic professional studies,first level

Course code and title: Safety at work

Teacher (Surname, middle initial, name):Marjanovic M.Vesna

Course status: Compulsory

Number of ECTS credits: 5

Prerequisites: none

Course aims:

Introduction to the provisions of Law about safety and health at work. Gaining knowledge about the most important dangers and disadvantages at work place.

Learning outcomes:

Getting to know national regulations related to the safety and health at work. Ability to recognize in practice perils and disadvantages at work place. Gained knowledge and students' skills for application measures,regulations and means of safety and health at work.

Syllabus

Theoretical instruction:

Introduction to the safety at work (Concept,Subject and Historical development of safety at work). Legal frame of safety and health at work (International law,National regulations:Constitution of the Republic of Serbia,Law about safety and health at work). Injuries at work (concept,types and characteristics of injuries at work). Professional illnesses (concept,types and causes of illnesses). Illnesses related to work (Cardiovascular illnesses,Chronic unusual respiratory diseases). Locomotive disorders. Bihevioral responses and psychosomatic diseases). Consumption syndrome,concept,defining,manifestation and prevention of consumption syndrome at work. Subjective causes of perils and disadvantages at work (Individual characteristics of personality,monotony,fatigue,years of age,sex). Measures and means of protection from perils and disadvantages at work caused by subjective causes (Professional orientation,education and selection,Working hours,Propaganda,Stimulation). Types and characteristics of disadvantages and perils at work and working surroundings and measures and means of protection. General and particular measures in safety and health at work domain.

Practical teaching:

Auditory and demonstrative,that are carried out in particular health institutions and practical examples are shown related to the well and badly organized safety and health system at work. Basic characteristics of the standard OHSAS 18001,2007.

Literature:

1. **B.Andjelkovic:Uvod u zastitu,Fakultet Zastite na radu,Nis,2005.**
2. **M.Tijanic,D.Djuranovic,R.Rudic,Lj.Milovic,Zdravstvena nega i savremeno sestrinstvo,Beograd,2010.**
3. **A.Ian Glendon,Sharon Clarke,Eugen McKenna:Human Safety and Risk Management,Second edition(2006.)ISBN 9780849330902**
4. **Zakon o bezbednosti i zdravlju na radu (Sl.Glasnik RS, br.101/05 i 91/15)**
5. **Drobnjak R.i grupa autora,Bezbednost i zdravlje na radu (knjige 1 do 6) za studente Visoke Poslovno-Tehnicke Skole Strukovnih Studija Uzice,VPTS,TEMPUS JPHES 158781,2010-2012.**

Number of active teaching classes: 60				Other classes:
Lectures: 2x15=30	Practical classes: 2x15=30	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Written exam	40
Practical classes	10	Oral exam	-

Colloquia	20		
Seminar papers	20		
Assessment methods:			

Study programme: Health care

Type and Level of Studies:Basic professional studies

Course code and title: Statistics

Teacher (Surname, middle initial, name):Cvetkovic D.Milica,Dikovic Z.Ljubica

Course status: Elective

Number of ECTS credits: 5

Prerequisites: none

Course aims:

To prepare students to:
- adopt basic concepts from statistics
- apply quantitative approach to problems from medicine domain
- learn to choose appropriate statistic methods,perform statistic analysis and essentially explain it
- learn program package Statistica for data processing

Learning outcomes:

Student is able to:
- Recognize and apply statistic concepts
- Know to collect,arrange,present statistic data tabularly and graphically
- Analyze statistic data
- Analyze and apply measures of population and sample
- Apply program package Statistica for statistic data processing
- Apply gained knowledge in solving medical problems

Syllabus

Theoretical instruction:

Introduction to medical statistics. History and development of statistics in health services. Importance of medical statistics for research. Importance and division of medical statistics. Problems of collecting,studying and presenting data. Research of health system. Development of concept. Stages in research process. Presentation of statistic data – numerical and graphic. Collecting and processing data,interpretation of research results.Theoretical instructions for seminar papers.

Practical teaching:

Practical application of medical statistics. Application of research in medicine. Stages of research and their application. Revelation and selection of research problem for seminar papers. Way of method selection and elaboration of research instruments. Manner and process of grouping and data processing,way of interpretation research results. Graphic presentation of obtained results. On the basis of sample,student should grade basic statistic parameters. Elaboration of seminar papers.

Literature:

1. **Grujic V.,Jakovljevic Dj.:Primena statistike u medicinskim istrazivanjima,cetvrto izdanje,Medicinski fakultet,Novi Sad,2007.**
2. **Hadzivukovic S.:Statisticki metodi,Univerzitet u Novom Sadu,Poljoprivredni fakultet,Novi Sad,1991.**
3. **Dacic M.:Statistika i informatika u zdravstvu,VZSSS,Beograd,2005.**
4. **Ristanovic D.,Dacic M:Osnovi metodologije naucno-istrazivackog rada u medicini,Velarta,Beograd,2006.**

Number of active teaching classes: 60				Other classes: 7x15
Lectures: 2x15	Practical classes: 2x15	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Written exam	-
		Oral exam	30
Colloquium 1	40		
Seminar papers	20		
Assessment methods:			

Study programme: Health care

Type and Level of Studies:Basic professional studies,first level

Course code and title: Summer professional practice

Teacher (Surname, middle initial, name): Pavic M. Sladjana

Course status: Compulsory

Number of ECTS credits: 4

Prerequisites: Finished Professional clinical practice 1 and 2

Course aims:

Application of gained knowledge for achieving high level of professional independence and development of skills for nurses' interventions during practice in health institutions of secondary and tertiary health care.

Learning outcomes:

With high level of independence and reliability,student can perform all tasks in real clinical surroundings,which is based on formerly gained knowledge,skills and experience. Student has well developed state of mind about personal responsibility,role in a team,need to always improve himself,to keep up with modern trends in various domains of health care. Student has developed in certain degree analytical and critical thinking and readiness to work on his own. Student has developed attitudes about working methods and mechanisms for quality promotion of various processes in real clinical surroundings. That is why he has a certain degree of multidisciplinarity at solving real clinical problems. Student can successfully communicate in real clinical situations with both patients and members of teams in which he works and his superiors,in chosen foreign language too. Student can keep nursery documentation on his own.

Syllabus

The subject consists of application of knowledge gained in clinical surroundings and according to real needs and situations that occur in given period for the sake of goals fulfillment,that is achieving clearly defined practice outcomes.

Literature:

Material that is in accordance with needs of Summer professional practice (all available literature,internal clinical documents etc.) and entire teaching material from the subjects that student attended.

Number of active teaching classes: 60				Other classes: 15x27=405
Lectures:	Practical classes:	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**
Activity during lectures	50	Written exam	
Elaboration of the diary of professional practice	20	Oral exam	30

Study programme: Health care

Type and Level of Studies:Basic professional studies

Course code and title: Surgery with health care

Teacher (Surname, middle initial, name): Gulan B.Maja, Bozovic M.Milos

Course status: Compulsory

Number of ECTS credits: 7

Prerequisites: none

Course aims:
Student will gain theoretical and practical knowledge about surgical health care and to use it correctly and professionally in favour of patient's health improvement.

Learning outcomes:
Student will be able to apply gained knowledge in his/her work in a highly professional and human manner,respecting personality and privacy of patients,based on the principles of medical ethics and life preservation.

Syllabus
Theoretical instruction:
Basic concept of health care in surgery. Profession of a nurse in the system of surgical health care. Orientation of surgical health care. Bleeding in surgery. Categorization of wounds. Haemostasis. Anaesthesia and resuscitation. Preoperative and postoperative health care in surgery. Infections in surgery. Shock condition. Pain control modalities. A brief overview on specific surgical areas. Oncological surgery. Transplant surgery. Basic knowledge from surgical prophylaxis. Division of injuries,surgical management of wounds. Basic types and causes of bleeding. Blood transfusion. Anaesthesia. Cardiac arest. Types of craniocerebral injuries. Importance of spontaneous subarachnoid haemorrhage. Brain tumours. Lumbar disc hernia. Basic knowledge about etiology,diagnostics and treatment of breast cancer. Types of thorax injuries. Importance of lungs cancer.
Practical teaching:
Educational guidelines for application of health care on the particular example in surgical clinical practice. Application of the processes of health care. Students should be educated how to approach patients through system of surgical health care. They should be introduced to modern diagnostic procedures in surgical clinical practice. Curing and treatment of patients with electrolyte disorders. Students should be shown ways of care and control of intravenous and intraarterial cannulation,measuring of CVP. Controle and care of drains. Treatment of bleeding wound. Education of students to regularly apply injection therapy, dressing posoperative wounds. Removing sutures. Education of students to recognize clinical manifestations of patients in the shock condition. Introducing students to specific surgical areas and modalities of pain control. Education of students to apply interventional measures at traumas. Education of importance of medical documentation in the intensive care unit. Note : practical teaching is realised on particular examples from clinical practice with continued practical education and surveillance of students.

Literature:

1. **Glisic R.:Zdravstvena nega u hirurgiji 1,Cicero,Beograd,2011.**
2. **Stevovic M.i saradnici:hirurgija za studente I lekare,Savremena administracija,Beograd,2000.**
3. **Lewis L.S.Dirksen SR,Heitkemper MM,Bucher L.:Medical surgical nursing:Assessment and management of clinical problems,8th edition,Canada,2011.**
4. **Terzic N.:Zdravstvena nega u hirurgiji,"DP Janko Stajcic"-Lazarevac,Beograd,2006.**
5. **Stojiljkovic J.:Urgentna medicinska pomoc sa negom,Knjiga-Komerc,Beograd,2006.**

Number of active teaching classes: 60				Other classes: 7x15
Lectures: 3x15	Practical classes: 3x15	Other teaching forms:	Study research work:	

Teaching methods: Lectures, exercises, assignments, projects, consultations.

Knowledge evaluation (maximum 100 points)

Pre-exam obligations	**Points**	**Final exam**	**Points**

Activity during lectures	10	Written exam	-
Practical classes	10	Oral exam	30
Practical work	20		
Colloquia	30		
Assessment methods:			