Diagnostic, therapeutic and care processes (6 ECTS)

- ***Clinical pharmacology (3 ECTS)***

General principles of pharmacology: Definition of pharmacologically active compound (active principle), objective assessment of risk / benefit ratio, therapeutic efficacy and toxicity of a molecule; The role of the nurse in pre-registration trials and in Phase IV post-marketing; branded, not-branded (generic), over the counter and diagnostic drugs. Concept of bioequivalence; main pharmaceutical and galenic forms;

Presentation of a leaflet, drug indications, relative and absolute contraindications. Routes of drug administration; side effects and adverse events as a cause of hospitalization; definition of: allergy, idiosyncrasy, tolerance, physical and psychic dependence, mutagenicity and teratogenicity in respect with drug therapy.

Main concepts of drug pharmacokinetics: mechanisms of absorption; bioavailability: topic and systemic therapies or for diagnostic purposes. Drug-binding to plasma proteins: plasma half-life and dose rate.

Distribution (and re-distribution) of drugs in biological fluids in the prediction of the duration of drug effect. Drug metabolism, induction and inhibition of drug metabolism: effect of dietary components; influence of genetic polymorphisms. Bioactivation of pro-drugs; clearance.

Main concepts of drug mechanism of action (drug pharmacodynamic): drug-target interaction and dose-effect relationship: definition of agonist (full, partial and allosteric) and antagonist (competitive and non-competitive). Main mechanisms of signal transduction. Drug potency and efficacy, therapeutic index. Pharmacological synergism; Examples of pharmacokinetic and pharmacodinamic interactions among drugs, foods and herbal medicines

For each class of drugs the student should know and recognize side effects, the route of administration, the main dietary and drug-drug interactions.

-Main drugs used for treating *depression, anxiety-based syndromes* (adherence to therapy) and *neurodegenerative* disorders. Therapy of pain according to the OMS classification (opioids, NSAIDs and adjuvants); Main antiemetic drugs; Drug treatment of major respiratory diseases (asthma and COPD): short- and long-acting bronchodilators and anti-inflammatory (topical and systemic steroids), xanthines, mucolytics. Issues related to the use of pulmonary delivery devices for topic use . Drugs for cough relief.

-*The therapy for reduction of cardiovascular risk factors: antihypertensive (main active principles).* Drugs used in pregnancy*; antidiabetics (main drugs for the management of type* 1, 2, and gestational diabetic patients); treatment of micro and macrovascular complications. *Anti hyper-uricemic.*; *anti-dislipidemic* (secondary prevention of cardiovascular events in risk patients). Indications and main gaols of the *antiplatelet and anticoagulant therapy* (aspirin and anticoagulants). Role of the nurse in the management of the patient treated with anticoagulants. Drugs of the *ischemic cardiomyopathies*: drugs for the management of the acute attack (nitroglycerine as reference compound) and for the secondary prevention. *Heart and renal failure*: ACEi, sartans, diuretics and positive inotropic (digitalis and not digitalis) drugs. Main drugs used as *anti-arrhythmic*.

Treatment of gastrointestinal disorders: antiacids and prokinetics, laxatives and anti-diarrheal: main drug-drug and drug-dietary component interactions. Drugs used for the hyper-secretory syndromes and for eradication of Helicobacter Pylory;--Therapy of *acute and chronic inflammatory diseases*:

main representative of non-steroidal and steroidal classes of drugs; Main regimens of treatment *of hormonal therapy* for *contraception and osteoporosis*:; *Antimicrobial Chemotherapy*: concepts of pharmacokinetics, pharmacodynamics and choice of regimen. Main classes of antibiotics time-and concentration-dependent: mechanism of action and side effects. Multiple preparations, antibiotic resistance and treatment of the most frequent hospital infections. Anti-retroviral, antifungal drugs for systemic use: mechanism of action and side effects.

Cancer Chemotherapy: classical, hormonal and immune modulators, tyrosine kinase inhibitors and monoclonal antibodies: mechanism of action and side effects. Drugs in palliative care. *Saline and colloidal solutions* for endovenous treatments.

- ***Food science and nutrition (1 ECTS)***

Food science and nutrition. Principles of nutrients. Function of nutrients. Energy balance and metabolism. Energy: unit of measure. Basal metabolic rate. Energy needs. Energy expenditure. Evaluation of nutritional status. Body composition. Carbohydrates. Classification. Function. Digestion and absorption. Glycemic index. Glycemic load. Sources of carbohydrates. Proteins. Classification. Function. Essential and non-essential amino acids. Digestion and absorption. Sources of proteins. Fats. Classification. Function. Digestion and absorption. Sources of fats. Water. Function. Water in foods. Mineral water. Different types of water. Minerals. Classification. Function. Absorption. Food sources. Vitamins. Classification. Function. Vitamin needs. Water- and fat-soluble vitamins. Food sources. Alcohol. Function. Absorption. Alcoholic unit. Different types of alcoholic beverages. Principles of a correct food habit. Guidelines for a healthy diet. Food pyramid. Mediterranean diet: definition

- ***Radiology and radioprotection (1 ECTS)***

Diagnostic Radiology: general concepts. Upper airways and lungs. Musculoskeletal radiology.

Gastrointestinal tract. Heart and periferal vessels. Genitourinary systems. Brain. Nuclear Medicine: general concepts. Imaging of Lung and Heart. Radioprotection: general concepts. Radiobiology: general concepts. Deterministic and stochastic effects. Radiation-induced side effects. Radiotherapy: general concepts. Association of radiotherapy with chemotherapy and hormonetherapy.

- ***Nursing applied to diagnostic, therapeutic and care processes (1 ECTS)***

Definitions and aims of professional processes, care pathways, care figures and diagnostic-therapeutic pathways
Management according to processes: advantages and methods of valuation.
Development and representation of care pathways:

- diagrams of flow
- matrix of responsibilities
- phases of care pathway development
- choice of Health Problems
- forming job team
- identifying appropriate professional interventions and their indicators

- analysis of process
- description of care pathway
- criteria of admission, discharge and control of process
- valuation of application and results of care pathway

Illustrations of PDTA applied to Health Priority Problems concerning the care of patient and his/her family in order to ensure the appropriate realization of diagnostic procedures, pharmacological treatments and diet indications.

Clinical nursing in medicine (9 ECTS)

- ***Internal medicine (4 ECTS)***

General concepts of Internal Medicine. Symptoms and signs. Clinical history. General medical semeiotics. Clinical methodology step by step (flow chart).

Disorders of the Cardiovascular system

Introduction to cardiovascular disorders. Reminds from anatomy and physiology. General semeiotics and diagnosis. Congenital heart disease. Atrial and ventricular septal defects. Patent ductus arteriosus. Congenital aortic stenosis. Coarctation of the aorta. Tetralogy of Fallot. Rheumatic disease. Valvular heart disease. Mitral stenosis. Mitral regurgitation. Mitral valve prolapsed. Aortic stenosis. Aortic regurgitation. Tricuspidal and pulmonary valve diseases. Pericardial, myocardial and endocardial disease. Acute pericarditis. Constrictive pericarditis. Pericardial effusions and cardiac tamponade. Myocarditis. Cardiomyopathy. Infectious endocarditis. Ischemic heart disease. Angina pectoris. Acute myocardial infarction. Arrhythmias. Bradyarrhythmias . Tachyarrhythmias with special reference to atrial fibrillation. Syncope. Heart failure. Arterial Hypertension. Atherosclerosis. Vascular disease. Stroke. Peripheral artery disease. Aortic disease. Arterial embolism. Venous thromboembolic disease.

Disorders of the respiratory system.

Introduction to respiratory disorders. Reminds from anatomy and physiology. General semeiotics and diagnosis. Infections of respiratory system. Bronchitis. Pneumonia. Obstructive disease. Asthma. Chronic obstructive pulmonary disease. Restrictive disease. Pulmonary fibrosis. Sarcoidosis. Bronchiectasis. Pleural diseases. Pleuritis. Pleural effusions. Pneumothorax. Pulmonary hypertension. Obstructive sleep apnea. Acute and chronic respiratory failure. Acid base equilibrium. Anaphylactic shock.

Disorders of the gastrointestinal system.

Introduction to gastrointestinal disorders. Reminds from anatomy and physiology. General semeiotics and diagnosis. Diseases of esophagus, stomach and duodenum. Esophagitis. Gastroesophageal reflux disease and hiatal ernia. Gastritis and peptic ulcer. Diseases of small intestine and colon. Inflammatory bowel disease. Disorders of absorption. Irritable bowel syndrome. Diseases of liver and biliary tract. Jaundice. Viral hepatitis. Alcoholic hepatitis. Drug-induced hepatitis. Hepatic steatosis. Hepatic and biliary cirrhosis. Gallstone disease. Diseases of pancreas. Acute pancreatitis. Chronic pancreatitis.

Disorders of the endocrine system.

Introduction to endocrine disorders. Reminds from anatomy and physiology. General semeiotics and diagnosis. Diseases of the pituitary gland. Hypopituitarism. Pituitary adenoma. Diabetes insipidus. Diseases of the thyroid gland. Hypothyroidism. Hyperthyroidism. Goiter. Thyroiditis. Diseases of the parathyroid gland and disorders of calcium-phosphorus homeostasis. Hypoparathyroidism. Primary and secondary. Hyperparathyroidism. Hyper- and hypocalcemia. Diseases of the adrenal gland. Hyperadrenocorticism. Hypoadrenocorrticism. Pheochromocytoma. Diseases of reproductive system. Hypogonadism. Amenorrhea. Menopause. Diseases of endocrine pancreas. Diabetes mellitus. Obesity and dyslipemias. Gout.

Disorders of the kidney and urinary tract.

Introduction to renal and urinary tract disorders. Reminds from anatomy and physiology. General semeiotics and diagnosis. Glomerular, tubular, interstitial e vascular diseases. Glomerulonephritis. Tubulo-. nterstitial nephropaties. Nephrovascular hypertension. Nephroangiosclerosis, thrombosis or renal artery and vein. Polycystic kidney. Urinary tract infections and pyelonephritis. Acute and chronic renal failure. Hemodialysis and peritoneal dialysis. Renal transplantation.

- ***Applied hygiene (2 ECTS)***

Aetiology, epidemiology and general/specific prevention of tetanus, diphtheria, pertussis, hepatitis A, B, C (topic integrated with the infectious diseases module), measles, mumps, rubella, varicella, poliomyelitis, tuberculosis (topic integrated with the infectious diseases module), influenza (topic integrated with the infectious diseases module), diseases due to the Human Papilloma Virus (HPV), invasive bacterial diseases and meningitides (topic integrated with the infectious diseases module), malaria, elements of epidemiology and prevention of hospital-acquired infections (topic integrated with the infectious diseases module), food hygiene, food-borne infections and modes of preservation of foods, generalities on aetiological factors, epidemiology and prevention of the main cardio-vascular and oncologic diseases.

- ***Infectious diseases (1 ECTS)***

Infectious diseases are the only communicable diseases. A student nurse must know the major diseases most frequently encounter in their profession and in particular diseases that are an occupational risk such as hepatitis virus, HIV or tuberculosis.

During the course will be studied the clinical, epidemiological, and especially the mode of transmission and therefore prevention of infectious diseases.

Nosocomial infections (the leading cause of death for patients hospitalized) are discussed with the role of all health personnel in transmission and prevention.

- ***Clinical nursing in medicine (2 ECTS)***

CARDIOVASCULAR PROBLEMS
The context of care
The multi-professional team in cardiology: responsibility and competence of the nurse.
The problems seen with cardiac
Analysis of the main physical problems, psychological and social.
The assessment of functional status: analysis of the main stairs in the literature to support nurse
Diagnostic and therapeutic services: acquisition and development of intellectual abilities
Drug therapy in cardiology: responsibility and competence of the nurse
The risk in clinical cardiology: what strategies
Responsibility for nursing competence:
- ✓ standard 12-lead ECG
- ✓ second Holter ECG dynamic
- ✓ holter blood pressure and cardiac Doppler ultrasound
- ✓ ecotransesofageo
- ✓ VCG and PTCA

Coronary artery disease in the acute and post acute:
Ischemic heart disease: analysis of clinical pathway-care: nursing skills and responsibilities.
The assumption of the patient: nursing assessment Nursing Outcomes Classification NOC results.
Analysis of nursing diagnoses more commonly found
The main NIC Nursing Intervention Classification.
The therapeutic education for the prevention of complications / recurrence.

Heart failure:
Heart failure: The network of social and health services: the chronic model care, medicine initiative
Analysis of clinical pathway-care: nursing skills and responsibilities.
The assumption of the patient: nursing assessment Nursing Outcomes Classification NOC results.
Analysis of nursing diagnoses more commonly found
The main NIC Nursing Intervention Classification.
The therapeutic education for the prevention of complications / recurrence.

Hypertension:
Hypertension: WHO and hypertension: analysis of the key recommendations.
The assumption of the patient: nursing assessment Nursing Outcomes Classification NOC results.
The therapeutic education for the prevention of complications / recurrence.

Acute pulmonary edema:
EPA: taking charge of the assisted nursing assessment Nursing Outcomes Classification NOC results.
Nursing diagnoses and collaborative problems more common.
The main NIC Nursing Intervention Classification

RESPIRATORY PROBLEMS
The multi-professional team in pneumology: responsibility and competence of the nurse.
The assessment of functional status: analysis of the main stairs in the literature to support nurse

Diagnostic and therapeutic services: acquisition and development of intellectual abilities
Drug therapy in pulmonary medicine: responsibilities and competences of the nurse
The risk of clinical pneumology: what strategies
Responsibility for nursing competence:

- ✓ O_2 therapy
- ✓ pulmonary function tests
- ✓ noninvasive ventilatory support BPAP CPAP
- ✓ Blood Gas (EGA)
- ✓ Thoracentesis
- ✓ Lung Steel

COPD and bronchial asthma:
Analysis of clinical pathway-care: nursing skills and responsibilities.
The assumption of the patient: assessment Nursing Outcomes Classification NOC results.
Analysis of nursing diagnoses more commonly found
The main NIC Nursing Intervention Classification
Support in the liberation of the airways
Management of intolerance to physical activity
management of anxiety
Prevention and treatment of nutritional deficiency risk
Therapeutic education for the prevention of complications and management of therapeutic regimen
Education for prevention and therapeutic management of asthma attack

Pneumonia:
The assumption of the patient: nursing assessment Nursing Outcomes Classification NOC results.
Analysis of nursing diagnoses more commonly found
The main NIC Nursing Intervention Classification

Prevention interventions in subjects at risk

Pulmonary embolism:

The assumption of the patient: nursing assessment Nursing Outcomes Classification NOC results.
Analysis of nursing diagnoses and collaborative problems more commonly found
The main NIC Nursing Intervention Classification
Prevention interventions in subjects at risk

GASTROINTESTINAL PROBLEMS

The multi-professional team in gastroenterology: responsibility and competence of the nurse.
The assisted with gastrointestinal problems
Analysis of the main physical problems, psychological and social.
The assessment of functional status: analysis of the main stairs in the literature to support nurse
Diagnostic and therapeutic services: acquisition and development of intellectual abilities
The risk of clinical gastroenterology: what strategies?
Responsibility for nursing competence:
paracentesis

Liver cirrhosis:

Analysis of clinical pathway-care: nursing skills and responsibilities.
The assumption of the patient: nursing assessment Nursing Outcomes Classification NOC results.
Analysis of nursing diagnoses more commonly found
The main Nursing Intervention Classification
The therapeutic education for the prevention of complications

Inflammatory bowel disease:

Analysis of clinical pathway-care: nursing skills and responsibilities.
The assumption of the patient: nursing assessment Nursing Outcomes Classification NOC results.
Analysis of nursing diagnoses more commonly found
The main Nursing Intervention Classification
The therapeutic education for the prevention of complications

Acute pancreatitis and chronic pancreatitis:

The assumption of the patient: nursing assessment Nursing Outcomes Classification NOC results.
The therapeutic education for the prevention of complications

KIDNEY /ENDOCRINOLOGICAL PROBLEMS

The multi-professional team in nephrology and endocrinology responsibilities and competences of the nurse.
The problems seen with nephrology and endocrinology
Analysis of the main physical problems, psychological and social.
The assessment of functional status: analysis of the main stairs in the literature to support nurse
Diagnostic and therapeutic services: acquisition and development of intellectual abilities
Drug therapy in nephrology and endocrinology: responsibility and competence of the nurse
insulin therapy
The risk in clinical nephrology and edocrinologia: what strategies
Responsibility for nursing competence:
hemodialysis
peritoneal dialysis
glucose monitoring
Management of microvascular complications

Acute and chronic renal failure .

Analysis of clinical pathway-care: nursing skills and responsibilities.
The assumption of the patient: nursing assessment Nursing Outcomes Classification NOC results.

Analysis of nursing diagnoses more commonly found
The main Nursing Intervention Classification
The therapeutic education for the prevention of complications

Diabetes mellitus type I and II:

Analysis of clinical pathway-care: nursing skills and responsibilities.
The assumption of the patient: nursing assessment Nursing Outcomes Classification NOC results.
Analysis of nursing diagnoses more commonly found
The main Nursing Intervention Classification
The therapeutic education for the prevention of complications

Hyper/hypo thyroidism:

Analysis of clinical pathway-care: nursing skills and responsibilities.
The assumption of the patient: nursing assessment Nursing Outcomes Classification NOC results.
Analysis of nursing diagnoses more commonly found
The main Nursing Intervention Classification
The therapeutic education for the prevention of complications.

INFECTIOUS PROBLEMS

The multi-professional team responsibility and expertise in infectious disease nurse.
The problems seen with infectious
Analysis of the main physical problems, psychological and social.
The assessment of functional status: analysis of the main stairs in the literature to support nurse
Diagnostic and therapeutic services: acquisition and development of intellectual abilities
Drug therapy in infectious diseases: responsibility and competence of the nurse
The risk of clinical infectious diseases: what strategies
Responsibility for nursing competence:
liver biopsy
protective insulation
escretao levy for Koch's bacillus

Acquired immunodeficiency syndrome

Analysis of clinical pathway-care: nursing skills and responsibilities.
The assumption of the patient: nursing assessment Nursing Outcomes Classification NOC results.
Analysis of nursing diagnoses more commonly found
The main Nursing Intervention Classification
The therapeutic education for the
prevention of complications.

Viral Epatitis:

Analysis of clinical pathway-care: nursing skills and responsibilities.
The assumption of the patient: nursing assessment Nursing Outcomes Classification NOC results.
Analysis of nursing diagnoses more commonly found
The main Nursing Intervention Classification
The therapeutic education for the prevention of complications

Tuberculosis:

Analysis of clinical pathway-care: nursing skills and responsibilities.
The assumption of the patient: nursing assessment Nursing Outcomes Classification NOC results.
Analysis of nursing diagnoses more commonly found
The main Nursing Intervention Classification
The therapeutic education for the prevention of complications.

Clinical nursing in surgery (7 ECTS)

- ***Clinical nursing in surgery (2 ECTS)***

Functional model (tasks model). Patient-centered modular care, Case Manager, Primary Nursing. Definition of hospitalization planned with screening/signs and symptoms. Emergency hospitalization. Classification of surgery.

Pre operative nursing care:

Pre operative nursing assessment: nutritional state, respiratory state, cardiovascular state, risk of infection, psychosocial factors spiritual and cultural beliefs.

Main nursing diagnoses and collaborative problems in the pre and post operative

Pre operative education: deep breathing, mobility, pain treatment, coping strategies

Bowel preparation, Skin preparation, Pre operative fasting.

Pre-anesthetic administration of drugs, antibiotic prophylaxis and antithrombotic. Person transfer to the operating sector.

Operating sector organization: background and path planning; Standard equipment of operating room; Operating room team

Skills of the nurse assigned to operating room and anesthetist attending and skills of the nurse assigned to surgical instrumentation

Environmental controls in order to maintain asepsis

Prevention of positioning injury during the surgery. Risk factors for chemical, physical, microclimatic, default devices, ionizing radiation, injury, burnout .

Personal protective equipment

Operative nursing care:

Operative nursing assessment

Clinical risk management in surgery: pre-operative, operative and post-operative check list

Targets of safety.

Anesthesia methods and nursing skills: local anesthesia, sedation, total anesthesia, epidural anesthesia, spinal anesthesia.

Management of pre-operative, operative and post-operative complications: nausea, vomit, hypoxia, anaphylaxis, hyperthermia.

Post-operative nursing care:

After operation ward acceptance

Nursing assessment. Nursing skills for treatment and prevention of main post-operative complications: Deep vein thrombosis, wound infection, haematoma, dehiscence , evisceration, hypothermia, haemorrhage, hypovolemic shock, urinary retention, paralytic ileus, bronchial-lungs complications, malnutrition.

Surgical wound directions. Drainage thypes and directions

Pain: valuation scales and treatment

Nursing care plan to breast surgery subjected person:

Pre-hospitalization; Hospitalization;

Pre-operative, operative and post-operative care plan

Removal surgery and breast reconstructive surgery methods

Treatment of main post-operative complications like lymphedema. Treatment of surgery ipsilateral arm. Therapeutic education and follow up.

Nursing care plan to digestive surgery subjected person:

Major malignant, benign and inflammatory colon and rectum diseases

Pre-hospitalization.

Pre-operative, operative and post-operative care plan

Nursing diagnosis

Nursing treatment of main complications. Therapeutic education and follow up.

Nursing care plan to gastric and esophageal surgery subjected person:
Major malignant, benign and inflammatory stomach and esophagus diseases
Pre-operative, operative and post-operative care plan
Surgery and main complications
Early and late dumping syndrome.
Main surgery and nursing care for obesity
Malnutrition.
Care plan to chest surgery subjected person:
Lung abscess. Lung cancer
Pre-operative, operative and post-operative care plan
Chest drainage directions. Positioning
Care plan to endocrine surgery subjected person:
Pancreas
Thyroid and parathyroid
Adrenal
Pre-operative, operative and post-operative care plan
Nursing treatment of main post-operative complications
Care plan to orthopedic surgery subjected person:
Pre-operative, operative and post-operative care plan to person subjected to:
Hip prothesis knee prothesis Arthroplasty and Osteosynthesis
Amputation Trans-skeletal traction Cast and external fixators
Care plan to enterostomy subjected person:
Enterostomy types
Surgical directions
Complications. Ostomy and devices care
Post-operative administration and diet plan
Nursing diagnosis
Closure of stoma and intestinal recanalization
Pain:
"Hospital without pain" was created in 2001
Main targets of "Hospital without pain"
Pain valuation scales and treatment
Hospital discharge:
Planning withing 72 hours of discharge
Types of discharge. Definition of protected discharge. Definition of difficult discharge. Risks of an unplanned discharge.

Nursing in chronic care and disability (6 ECTS)

- ***Geriatrics (2 ECTS)***

The biology of aging, including the main theories of aging, the study of longevity and the specific role of genes and environment.

The comprehensive assessment of elderly patients; definition of disability; hospital services and home care for the elderly.

The pharmacology of aging (pharmacokinetics and pharmacodynamics).

The aging of cardiovascular system and cardiovascular diseases: ischemic heart disease; heart failure; atrial fibrillation; hypertension. In particular, the course will address the specificity of symptoms, diagnosis and therapeutic approach to the elderly patient.

The cerebrovascular diseases and degenerative brain diseases: in particular ischemic and hemorrhagic stroke; dementia; delirium, depression, Parkinson's disease; the course will address the specificity of symptoms, diagnosis and therapeutic approach to the elderly patient.

Immobilization and its complications in the elderly, with particular emphasis on pressure ulcers.

Malnutrition in the elderly.

Urinary incontinence: transient and persistent urinary incontinence.

- ***Medical oncology (1 ECTS)***

Introduction and general concepts in oncology. The proper multidisciplinary approach to the patient with cancer. Coordinated team of professionals in oncology. Epidemiology of the most common types of human cancer. Generic and specific risk factors for most common cancers. Hereditary forms of cancer and increased risk for cancer due to genetic pattern. Early diagnosis of the different types of cancer, using ultrasound scan, CT scan, NMR, PET and scintigraphy with radio-labeled compounds. Serum and tissue markers for the presence of a tumor. Staging the disease: the TNM system. Anticancer drugs: concepts of neo-adjuvant, adjuvant and 1° line chemotherapy. Basic principles in radiotherapy. Integrated treatment of the patient with cancer. Acute and delayed toxicity associated to chemotherapy and radiotherapy. Estimation of results of therapy. Enrolling patients in controlled clinical trials. Ethical issues. Cachexia: a frequent para-neoplastic syndrome in patients with cancer. The pathophysiology of cachexia. Terminality and quality of life.

Evidence based nursing (4 ECTS)

- ***Medical statistics (1 ECTS)***

Probability calculus. Bayes Theorem and Diagnosis. Test sensibility and specificity; predictive values. Binomial; Gauss distributions. Descriptive statistics.
Interpretation of clinical and laboratory findings.
Variability of clinical measurements. Agreement and reliability.
Random Sampling. Estimators and confidence intervals.
Experimental Designs and Controlled Clinical Trials.
Observational Studies and Etiological research.

- ***Research methodology in nursing (2 ECTS)***

The search process: Definition of research and research nursing.
Ethical aspects of research: Good Clinical Practice and Ethics Committees.
The research phases: The aim of research. Conceptualization of Research problem.
Research questions, hypotheses and clinical questions.
Approaches to nursing research: Qualitative-The phenomenological research, ethnography, grounded theory designs.
Quantitative- Observational Research, quasi-experimental, experimental designs.
Selection of Sampling.
Data collection methods.
Interpretation and dissemination of research results.
Bibliographic and review of the literature: definition and purpose.
Primary source databases: Medline/PubMed structure General criteria for searching databases: boolean operators free text terms and MeSH thesaurus.
Analysis of article.
Database of secondary source: Guidelines, systematic reviews and meta-analysis.
Cochrane-Joanna Briggs Institute.
Guidelines: basic requirements and analysis: National Guideline Clearinghouse-Scottish.
Intercollegiate Guideline Network-New Zealand Guidelines Group.
National Program Guidelines (PNLG).
Centre for Evaluation of Effectiveness of Health Care (CeVEAS)-Centers for Disease Control and Prevention (CDC).
Registered Nurses' Association of Ontario (RNAO).
AGREE Collaboration (AGREE) Evidence based nursing-methodological approach.
Hierarchies and levels of evidence.
Critical appraisal-topic journal Evidence-Based Nursing.
EBN website online.
meta engines: database-trip SUM search 2.
Application of research and tools for applying Evidence to practice.

- ***Nursing in health care (1 ECTS)***

- Analysis of the Community / areas and tools for the analysis of the Community (health profiles - spatial profile, anthropological,profile psychological profile, access to services, etc.); concepts of “systems and network”;

- Interaction person-family-community (family as an open system in interaction with the environment, roles, social status, social support and individual well-being);
- Evidence-Based Prevention and health education (from the needs analysis to planning and evaluation of educational interventions); Design, implementation and evaluation of health education interventions aimed at the individual and the community;
- Research activities in the community context (fields, methods and tools for research in the community);
- The epidemiological investigation;
- The vaccination schedule, multi-ethnic issues.

Perinatal and pediatric nursing (4 ECTS)

- ***Pediatrics (1 ECTS)***

The developing ages..The healthy newborn and its characteristics. The nonatal adaptation. Apgar index and its prognostic relevance. The importance of an adequate oxygen intake. Physical examination of the newborn. Neonatal jaundice, Newborn Hemorrhagic Diseases, metabolic disorders of the newborn, neonatal infections, neonatal respiratory syndromes. Neonatal screenings. Breastfeeding, feeding in the developing age. Growth stages of the developing age. Main respiratory diseases of children. Main gastrointestinal diseases of children. Psycho-motor development of children. Febrile seizures.

- ***Pediatric nursing (2 ECTS)***

History of Pediatric Nursing as a separate discipline. Charles West. The concept of "family-centered care" and its applications in clinical practice. The concept of "atraumatic care" and its applications in clinical practice. Pain in children. Tools to evaluate pain. Methods to prevent and control procedural pain in children. Organization of care in pediatric hospitals. The rights of children in hospital. Nursing assessment of the child. Measurement of blood pressure, heart rate, respiratory rate, body weight, body temperature, stature, circumferences. Use of growth charts. Preparation of drugs: situations of risk for errors risks. Safety rules to prevent errors in drug preparation. Calculation skills. Administration of drugs: approach to the child receing drug therapy. Venipuncture. Oral administration. Intramuscular, hypodermic, rectal and ocular administration of drugs. Therapeutic education at hospital discharge. Nursing care of children with fever. Blood culture. Urine sample collection, Urinary catheterization. Nursing care of children with febrile seizure. Nursing care of children with gastroenteritis and/or dehydration. Nursing care of children with respiratory problems: bronchiolitis, croup, epiglottitis. Oxygen therapy in children. Assessing SpO_2. Aerosol drug administration. Airway sampling. Skin care of children. Tools to evaluate the risk of pressure ulcers. Nursing care of children undergoing surgery. Gastric tube insertion. The abused child. Nursing care of children with chronic diseases: type 1 diabetes, cystic fibrosis. Nursing care of children with cancer. Nursing care of the healthy newborn. Nursing care of the newborn affected by the main newborn diseases. Assistenza al bambino con patologia cronica: diabete mellito, fibrosi cistica. Education and support to the family after delivery.

- ***Obstetric care (1 ECTS)***

Nursing care during diagnostic interventions. Nursing care in the prevention of female genital apparatus cancers and of sexually transmitted diseases. Nursing care of women in menopause. Nursing care of women undergoing abortion. Nursing care of women undergoing hysterectomy. Physical, psychological and social aspects of pregnancy. Health education: diet, hygiene and methods of preparation to delivery. Diagnostic issues of pregnancy. Clinical assessment and checks during pregnancy. Assessment of fetal wellbeing. Main complications of pregnancy: 1st, 2nd and 3rd pregnancy trimester: hypertension, diabetes, isoimmunization, hemorrhagic complications, gestosis. Nursing issues in the different phases of physiologic delivery. Pain control. Preparation of delivery room. Nursing care of the newborn in the delivery room. Nursing care during post-partum and puerperium. Nursing care during dystocial delivery. Nursing care during cesarean section. Complications of afterbirth. Organization of the maternal-child department. Integration among the health care professionals in the maternal-child department.