UNIVERSIDAD DE BURGOS

COURSE DESCRIPTIONS

Degree in Nursing

➢ 1st year

7564 HUMAN ANATOMY

Lesson 1. General Concepts.
Anatomical position. Anatomical planes. Anatomical nomenclature. Structural organization: organs, apparatus and systems.

Lesson 2. Circulatory System.
Heart. Large vessels of the thorax and abdomen.

Lesson 3. Respiratory System.
Upper and Lower Airways. Pleura. Intrathoracic spaces.

Lesson 4. Digestive System.
Digestive tract and accessory organs. Spleen. Peritoneum.

Lesson 5. Urinary System.
Kidney. Urinary tract.

Lesson 6. Male Genital System.
Prostate. Urethra. Penis. Scrotum. Testicles. Seminal tubes.

Lesson 7. Female Genital System.
Uterus. Fallopian tubes. Ovaries. Vagina. Vulva. Female urethra.

Lesson 8. Endocrine System.
Hypothalamic-pituitary system. Thyroid gland. Parathyroid glands. Adrenal glands.

Lesson 9. Central and Autonomous Nervous Systems.
Parts of CNS. Spinal cord. Meninges. Cerebrospinal fluid. Autonomous system.
Main nervous plexuses.
Organ of vision. Organs of audition and balance.

Lesson 10. Musculoskeletal System
Overview. Nomenclature.

Lesson 11. Cranium and Face.
Bones. Joints. Ligaments. Muscles. Nerves.

Lesson 12: Thorax.
Bones. Joints. Ligaments. Muscles. Spine. Mammary gland.

Lesson 13. Upper Limb.
Bones. Joints. Ligaments. Muscles. Main arteries, veins and nerves.

7565 NURSING HISTORY AND NURSING THEORIES

Historical Evolution of Nursing Care

History of Nursing.
Lesson 1. Concept of Nursing and its relationship with caring.
Lesson 2. Professional care.
Lesson 3. Specific factors influencing the development of Nursing.
Lesson 4. Disease care and attention in classical cultures: Greece and Rome (400 to 600 b.C.). Contribution of Greece to humankind knowledge and care. Teachers and caregivers in Greece and Rome. Interpretation of disease with the emergence of Christianity.
Lesson 5. Vocational era of care in the Higher (5th to 10th centuries) and Lower Middle Ages (11^{th} to 15^{th} centuries).
Lesson 6. Care for the sick during the Renaissance, Reformation and Counter-reformation (15^{th}-16^{th} centuries).
Lesson 7. Care of the sick during the 17th and 18th centuries. New approaches to disease and poverty. Hospices. Sisters of Charity, Chamillians.
Lesson 8. 19^{th} century. Beginning of professional Nursing. Florence Nightingale (1851-1860).

Lesson 9. 20th century. Professional Nursing in Spain (1915). Medical assistant/registered nurse (ATS)

Lesson 10. 20th century. Nursing in University. Registered nurse (D.U.E.)

Lesson 11. 21st century. Harmonization of university studies. Organic Law on Universities (Ley Orgánica de las Universidades, LOU), 6/2001, of 21st December. The Bologna process

Conceptual Nursing Framework: Models and Theories.

Lesson 12. Epistemology of care.

Lesson 13. Nuclear phenomena of Nursing Science.

Lesson 14. Conceptual framework of Nursing: Models and Theories.

Lesson 15. Overview of Nursing models. Florence Nightingale.

Lesson 16. Nursing models: Virginia Henderson and Dorotea Orem.

Lesson 17. Nursing models: Hildegarde Peplau.

Lesson 18. Nursing models: Callista Roy.

Lesson 19. Nursing models: Madelaine Leininger.

Lesson 20. Nursing models: Moyra Allen

7566 CELLULAR BIOLOGY AND HISTOLOGY

Unit I. Introduction

Lesson 1. Objectives and Competencies

1. Objectives. 2. Contents of Subject. 3. Evaluation methods. 4. Training activities and teaching methodology. 5. Bibliography sources and Internet resources.

Unit II. Cellular Biology

Lesson 2. Introduction to Cells

1. The Theory of Cells. 2. Prokaryote and eukaryote cells. 3. Organization of eukaryote cells.

Lesson 3. Biological Membranes and Cell Surface

1. Composition and architecture of membranes. 2. Dynamics and fluidity of membranes. 3. Permeability of membranes. Membrane transportation. 4. Cell surface. 4.1. Extracellular matrix. 5. Cellular adhesion and polarity. 6. Intercellular junctions and their functions.

Lesson 4. Cytoplasm

1. Structure and function of cytoplasm. 2. Cytoskeleton. 2.1. Microtubules, microfilaments and intermediary filaments. 2.2. Centrosome, cilia and flagella.

Lesson 5. Cytoplasmic Organelles

1. Ribosomes. 2. Endoplasmic reticulum. 3. Golgi complex. 4. Lysosomes. 5. Peroxisomes. 6. Mytochondria. 7. Vesicular transit, secretion and endocytosis.

Lesson 6. Nucleus

1. Nuclear structure and function. 2. Nuclear envelope (nuclear membrane). 3. Nucleolus. 4. Chromosomes and chromatin.

Lesson 7. Cell Reproduction

1. Cell cycle. 2. Cell division. 2.1. Mitosis and cytokinesis. 3. Meiosis. 4. General cell adaptations. Cell death.

Unit III. Histology

Lesson 8. Introduction to Histology

1. Concept and historical development of histology. 2. Tissue classification. 3. Techniques used in histology. 4. Microscopy.

Lesson 9. Epithelial Tissue

1. Definition and general characteristics. 2. Epithelial types. 2.1. Protective epithelia. Classification and functions 2.2. Glandular epithelia: endocrine and exocrine glands. Classification, histological organization and function

Lesson 10. Connective Tissue

1. Definition and general characteristics. 1.1. Connective tissue components and cells. 1.2. Extracellular matrix. 2. Types of connective tissue. 3. Bone tissue.
Components. Osteogenesis. 4. Cartilage tissue. Components, histogenesis, growth and regeneration. 5. Adipose tissue. Organization, function and histogenesis.

Lesson 11. Muscle Tissue

1. Concept and classification. 2. Unstriated muscle tissue. Structure and organization of unstriated muscle fibres. 3. Skeletal striated muscle tissue. Organization of myofilaments. 4. Cardiac striated muscle tissue. Structure and characteristics of myocardial cells. Intercellular relationships.

Lesson 12. Nerve Tissue

1. General characteristics. 2. Cell types. 3. Components and characteristics of neurons. Types of neurons. 4. Neuroglia. Definition and classification. Structure and functions. 5. Nerve fibres. Synapses

Lesson 13. Blood

1. Definition and general characteristics. 2. Cell types. 3. Haematopoiesis. Definition and overview. Regulation

UNIVERSIDAD DE BURGOS

7567 HUMAN BIOCHEMISTRY

UNIT I: INTRODUCTION TO BIOCHEMISTRY

1. OBJECTIVES AND COMPETENCIES

1. Objectives. 2. Content: thematic units of the Course. 3. Competencies that the student must acquire. 4. Training activities and teaching methodology. 5. Evaluation methods. 6. Source of bibliographical information and internet resources.

2. INTRODUCTION TO BIOCHEMISTRY

1. Concept and objectives of Biochemistry. 2. Biomolecules: function-structure relationship. 3. Weak interactions in aqueous medium and their importance in biological systems. 3.1. Nature of non-covalent interactions. 3.2. Mission of water in biological processes.

UNIT II: STRUCTURE AND FUNCTION OF BIOMOLECULES

3. GLYCIDS

1. Concept and classification. 2. Monosaccharides. 3. Disaccharides. 4. Polysaccharides. 5. Glycoconjugates: proteoglycans, glycoproteins and glycolipids. 6. Biological importance of glycids.

4. LIPIDS

1. Concept and classification. 2. Fatty acids. 3. Triacylglycerols. 4. Waxes. 5. Glycerophospholipids. 6. Sphingolipids. 7. Eicosanoids. 8. Steroids. 9. Terpenes. 10. Carotenoids and other compounds.

5. PROTEINS

1. Functions and biological importance of proteins. 2. Aminoacids. 3. Peptide bond and peptides. 4. Structure and composition of proteins. Denaturation and folding. 5. Fibrous and globular proteins.

6. ENZYMES

1. Function and general characteristics of enzymes. 2. Enzyme mechanism of action. 3. Enzyme kinetics. Michaelis-Menten equation. 4. Enzymatic inhibition. 5. Allosteric enzymes.

7. NUCLEOTIDES AND NUCLEIC ACIDS

1. Classification and biological function of nucleic acids. 2. Nucleotides. 3. Structure and function of deoxyribonucleic acid. 4. Structure and function of ribonucleic acid. 4. Nucleotides with other functions.

8. VITAMINS

1. General considerations. 2. Classification. 3. Nicotinic acid. 4. Riboflavin. 5. Pantothenic acid. 6. Folic acid. 7. Biotin. 8. Thiamine. 9. Pyridoxine. 10. Vitamin B12. 11. Ascorbic acid. 12. Vitamin A. 13. Vitamin D. 14. Vitamin E. 15. Vitamin K.

UNIT III. TRANSMISSION OF GENETIC INFORMATION

9. DNA REPLICATION

1. Introduction. 2. DNA replication in prokaryotes. 3. DNA replication in eukaryotes. 4. DNA repair. Mutations and genetic variability.

10. SYNTHESIS AND MATURATION OF RNA

1. Introduction. 2. DNA transcription. 3. Maturation of eukaryote RNA.

11. PROTEIN BIOSYNTHESIS

1. Basic principles of translation. 2. Genetic code. 3. Protein biosynthesis. Post-translational modifications. 4. Genetic expression control

UNIT IV: GENERATION, TRANSFORMATION AND USE OF METABOLIC ENERGY

12. INTRODUCTION TO METABOLISM. PRINCIPLES OF BIOENERGETICS

1. Introduction to metabolism. 2. Types of metabolic pathways. 3. Energy coupling. 4. Role of ATP as energy intermediary. 5. Oxidation-reduction (redox) reactions. 6. Catabolism and anabolism.

13. REGULATION OF METABOLIC PATHWAYS.

1. Types of metabolic regulation. 2. Enzyme concentration control. 3. Control of catalytic activity of enzymes. 4. Regulation by substrate accessibility. Compartmentalization. 5. Hormone regulation of energy metabolism in mammals.

14. GLYCOLYSIS AND GLUCONEOGENESIS

1. Overview of glycolysis. Localization and energy yield. Relationship with other pathways. 2. Phases and reactions of glycolysis. 3. Anaerobic glycolysis. 4. Regulation of glycolysis. 5. Overview of gluconeogenesis. 6. Gluconeogenesis reactions Pathway precursors. 7. Coordinated regulation of glycolysis and gluconeogenesis. Futile cycles.

15. CITRIC ACID CYCLE

1. Oxidative decarboxylation of pyruvate. Pyruvate dehydrogenase complex. Regulation of complex. 2. Overview of citric acid. Cell localization. Action coupled with the respiratory chain. 3. Cycle reactions: conversion of citrate into oxaloacetate. 4. The cycle as source of biosynthetic precursors. Anaplerotic pathways. 5. Regulation of citric acid cycle.

16. OXIDATIVE PHOSPHORYLATION

1. Overview. Cell localization. 2. Enzymatic complexes carriers of electrons. 3. Proton-motive force and ATP synthesis. Chemiosmotic theory. 4. Decoupling agents. 5. Glycerol-3-phosphate and malate-aspartate shuttles. 6. Regulation of oxidative phosphorylation. 7. Energy yield of oxidative phosphorylation. 8. Cellular processes driven by proton gradients. 9. Production of reactive oxygen species.

17. PENTOSE PHOSPHATE PATHWAY

1. Overview. Function and localization of pathway. 2. Reactions and relation to other metabolic pathways. 3. Control of pentose phosphate pathway.

18. GLYCOGEN METABOLISM

1. Glycogen as storage of polysaccharides and source of glucose. 2. Degradation of glycogen. Entry into glycolysis. 3. Synthesis of glycogen. 4. Coordinated regulation of glycogen phosphorylase and glycogen synthetase.

19. METABOLISM OF LIPIDS AND FATTY ACIDS

1. Overview. Triacylglycerols (triglycerides) as deposits of energy. 2. Digestion, absorption and mobilization of fats. 3. Mobilization of fats and transport of lipids through the blood (lipoproteins). 4. Fatty acid oxidation. 5. Formation of ketonic bodies. 6. Biosynthesis of fatty acids. Coordinated regulation of the synthesis and degradation of fatty acids. 7. Cholesterol biosynthesis.

20. AMINOACID METABOLISM AND UREA CYCLE

1. Introduction. 2. Deamination of aminoacids. 2.4. Transport of ammonia. Glucose-alanine cycle. 3. Urea cycle. Localization. Connection between urea cycle and citric acid cycle. 4. Degradation of aminoacid carbon skeletons.

7568 PSYCHOSOCIAL SCIENCES AND NURSING THEORIES

Block I. Psychology, the Science that studies Behaviour

1. Contributions of psychology to the behaviour of healthy and sick individuals.
2. Most relevant contributions of the different models and psychological theories to explain human behaviour.

Block II. Thinking and Feeling

1. Cognitive processes.
Perception.
Attention.
Memory.
Thought.
2. Intelligence and problem solving.
3. Emotion and motivation.

Block III. Learning and Behaviour

1. Learning.
Learning by conditioning.

Learning by observation.
Other learning models.
2. Individual and social behaviour.
Roles and social norms.
Social behaviour.
Social support: value in sickness.

Block IV.- Interpersonal Communication
1. Communication as interaction and relation.
Professional relationships in health settings.
2. Psychological aspects involved in health professional-patient communication.
Internal dialogue.
Coping styles.
Attributive style.
Empathy and self-control.
3. Social skills and communicative self-efficacy.
Assertive behaviour.
Verbal and non-verbal communication.
4. Resources and techniques in various social skills.
Conversations.
Asking for changes in behaviour.
Accepting and rejecting criticism.
Communications in difficult situations.
Anger management.
5. Emotional work.
Professional demands.
Emotional competency.

Block V. Personal development
1. Perspectives and problems in the study of human development.
2. Influences on development.
Personal factors: heredity and temperament.
Contextual factors: family, education system and health system.
3. Development in childhood.
Physical and psychomotor development.
Cognitive development.
Affective and social development.
Important stage-related task: socialization.

4. Development in adolescence.
Physical changes.
Cognitive development.
Affective and social development.
Important stage-related task: construction of identity.
5. Development in adulthood.
Physical changes.
Cognitive development.
Affective and social development.
Important stage-related task: Generativity and responsibility.
6. Development in old age.
Physical and psychomotor development.
Cognitive development.
Affective and social development.
Important stage-related task: adaptation.

7569 BIOETHICS AND NURSING CODE OF PROFESSIONAL CONDUCT

Unit 1. INTRODUCTION
Lesson 1. Basics of Bioethics
Bioethics: Basic concepts. History.
Principles of Bioethics. The Belmont report.
Relationship between Bioethics and Law.
Lesson 2. Analytic Method in Bioethics
Analysis in Bioethics.
Problem solving method in Bioethics. Theory of values.

Unit 2. PRINCIPLES OF BIOETHICS
Lesson 3. Principle of Autonomy
Autonomy: meaning, limits and difficulties. Consent Law on Autonomy.
Lesson 4. Privacy and Confidentiality
Confidentiality and professional secrecy:
Privacy, confidentiality and secrecy.
Data protection law.

Lesson 5. Information and Documentation

Information and documentation: information recipient. Ethics and communication.

Helping decision-making. Exceptions to information.

Lesson 6. Principle of Justice. Organ Donation

Justice: Ethics of justice. Health ethics. Resource distribution.

Organ Donation: history, ethical conflicts in organ transplantation.

National Transplant Organization: functions.

Unit 3. HEALTH AND SICKNESS

Lesson 7. Bioethical Problems in Child Healthcare

Maturity of person.

Competency of minor.

Organic Law 2/2010, of 3rd March, on the sexual and reproductive health and on the voluntary interruption of pregnancy.

Lesson 8. Bioethical Problems in Old Age

The elderly: competencies of elderly people. Incapacitation. Maltreatment in old age

Lesson 9. Bioethical Problems in Functional Diversity

Functional diversity. Disability and mental disease: Ethics and disability.

Ethics and mental disease.

Convention on the Rights of People living with Disabilities.

Lesson 10. Bioethical Problems at Exiting Life

Exiting life: History. Current situation.

Ethical conflicts at the end of life.

Euthanasia and death with dignity.

Living will.

Regional laws on the rights and guarantees of the dignity of the person in the process of dying.

Lesson 11. Bioethical Problems in Chronic Diseases

Chronic and acute diseases.

Disease classification.

Self-care and responsibility of patient.

Conflicts in health care of chronic diseases.

Lesson 12. Bioethical Problems in Women's Care

Bioethics in women's care at doctor's office.

Importance of gender violence as a health problem.

Detection of gender violence cases.

Attention to women suffering from gender violence.

Unit 4. ETHICS AND THE NURSING PROFESSION.

Lesson 13. Ethics of Responsibility and Care

Ethics of responsibility and ethics of care. Care or cure.

Care as basis for the profession.

Lesson 14. Spiritual Care in the Clinical Relationship

Spirituality and spiritual needs.

Detecting spiritual needs of patients.

Attention to suffering.

Lesson 15. Professional Ethics

Ethics and profession. Ethics and professional commitment. Ethics and the Nursing profession.

Professional responsibility.

Nursing Code of Ethics.

Professional secrecy. Conscientious Objection.

Lesson 16. Ethics in Research. Ethics Committee

Fundamentals of research ethics:

Oviedo Convention on Human Rights and Biomedicine.

Health Care Ethics Committees. What are Care Ethics Committees. Composition, functions, objectives.

7570 BIOSTATISTICS. INFORMATION SOURCES IN NURSING.

STATISTICAL METHOD

•Lesson 1. Basic Concepts

Definition. Importance of statistics in health sciences. Most frequently used terms. Concept of population and sample. Difference between descriptive statistics and inferential statistics.

•Lesson 2. Descriptive Statistics

Types of variables. Tables and graphic representation of data. Indices and measuring central trend, scattering, shape and position of data distribution.

•Lesson 3. Introduction to Probability

Concept of Probability. Distribution of probabilities. Binomial distribution. Central limit theorem. Normal and typified normal distribution. Use of tables.

•Lesson 4. Analytic or Inferential Statistics.

Relationship between statistic data and parameters. General concepts on estimation of parameters. Point and range estimation. Sampling types. Systematic and random error. Validity and precision. Biases.

•Lesson 5. Contrast of Hypothesis and Statistical Significance

Concept of hypothesis. Null and alternative hypotheses. Statistical signification and clinical signification. Errors in contrasting of hypothesis. Interpretation of p value. Parametric and non-parametric tests.

•Lesson 6. Proportional Comparison

Pearson's chi-squared test. Fischer exact test. McNemar test for paired data.

•Lesson 7. Comparison of Means

Student t-test for independent samples and for paired data.
Non-parametric tests for comparison of means. Introduction to ANOVA.

•Lesson 8. Correlation and Regression

Concept of correlation and regression. Linear regression. Covariance.

EPIDEMIOLOGIC METHOD.

•Lesson 1. Biostatistics and Epidemiology

The epidemiological method. Relationship between statistics and epidemiology. Person, place and time variables. Measures of frequency: Incidence and Prevalence.

•Lesson 2. Clinical and Epidemiological Research

Types of epidemiologic studies: characteristics, advantages and limitations.

•Lesson 3. Measures of Association and Impact.

Definition of risk. Relative risk, attributable risk and Odds Ratio. NNT.

•Lesson 4. Diagnostic Test Study

Validity of a diagnostic test. Sensibility and specificity. Positive and negative predictive value. ROC curves. Screening tests.

•Lesson 5. Sources of Information in Nursing

Data sources. Bibliography search and recovery of information.
Selection of resources and quotation of information sources.
Introduction to evidence-based Nursing. Meta-analysis.

DEMOGRAPHY.

•Lesson 1. Static Demography.

Demography and public health. Demographic phenomena. Information sources.
Static demography: data expression and analysis. Population pyramid.

•Lesson 2. Dynamic Demography

Concept and importance. Natality and fecundity. Migratory balance. Life expectancy and mortality. Direct and indirect methods of rate adjustment.

7571 NURSING TECHNIQUES AND NURSING CARE PLANS

Unit 1. Health Care Setting

Lesson 1. Access to Nursing Care

- Health-care levels.
- Standard measurements.

Unit 2. Nursing Methodology: Nursing Process

Lesson 2. Nursing Process

- Historical evolution.
- Functional analysis. Analysis of the stages involved.

Lesson 3. Assessment

- Data collection.
- Types and sources of data.
- Assessment tools.
- Virginia Henderson's Nursing model.
- Marjory Gordon's functional health patterns.

Lesson 4. Physical Examination and Vital Signs

- Vital signs.
- Crown-rump examination.

Lesson 5. Clinical Interview

An assessment tool.

A caring tool.

Lesson 6. Virginia Henderson's Need Theory

Assessment method.

Assessment by Virginia Henderson's need theory.

Lesson 7. Marjory Gordon's Functional Patterns

Functional pattern assessment method.

Assessment through Marjory Gordon's functional patterns.

Lesson 8. Nursing Diagnosis

- Bifocal model.
- NANDA taxonomy and structure.

Lesson 9. Nursing Care Planning

- Problem prioritization.
- NOC taxonomy.
- NIC taxonomy.
- Collaboration problems.

Lesson 10. Implementation of Health Care Plan

- Systematization of Nursing care.
- Nursing registries.

Lesson 11. Assessment

- Assessment process.
- Relationship with other stages in the process.

Unit 3. Nursing Care

Lesson 12. Pain Management

- General concepts.
- Diagnoses, Nursing NOC and NIC.

Lesson 13. Dependency-Caused Lesions

Skin integrity.

Prevention.

Lesson 14. Mobilization of Bedridden Patients

Positions.

Changing positions.

Environment of bed-ridden patient.

Care of bed-ridden patient.

Lesson 15. Patient Hygiene

Self-care: Hygiene.

Hygiene of bedridden patient.

Demonstration Rooms

Demonstration rooms.

- Procedures to measure vital signs and anthropometric indices.
- Patient's environment. Standard precautions and precautions based on propagation mechanism.
- Basic body mechanics and patient mobilization. Patient positions.

Changing positions.

- Bed of patient. Open/closed. Occupied/empty. Surgical.
- Patient's hygiene.
- Procedures to help patient in respiration, eating and evacuation.
- Procedures to help patients to dress and to undress.
- Administration of oral and topical medication.

7572 HUMAN PHYSIOLOGY

Unit 1. General Concepts of Physiology

Lesson 1

Introduction to Physiology.

Lesson 2

Interactions between cells and extracellular medium.

Lesson 3

Membrane potentials.

Lesson 4

Homeostasis and control.

Unit 2. Nervous System

Lesson 5

Nervous system organization.

Lesson 6

Autonomous nervous system: sympathetic and parasympathetic.

Lesson 7

Physiology of sensitivity.

Unit 3. Blood and Circulatory System

Lesson 8

Blood.

Lesson 9

Coagulation.

Lesson 10

Cardiovascular physiology.

Lesson 11

Immune system.

Unit 4. Respiratory System

Lesson 12

Respiratory mechanics.

Lesson 13

Gas exchange.

Unit 5. Digestive System

Lesson 14

Digestive system. (I)

Lesson 15

Digestive system. (II)

Unit 6. Renal System

Lesson 16

Kidneys. (I)

Lesson 17

Kidneys. (II)

Lesson 18

Fluid and electrolyte balance.

Unit 7. Muscular System

Lesson 19

Muscles and body movement control.

Lesson 20

Physiology of exercise.

Unit 8. Endocrine system.

Lesson 21

Introduction to the endocrine system.

Lesson 22

Regulation of metabolism.

Lesson 23

Metabolism and energy balance.

Lesson 24

Control of glucose homeostasis.

Lesson 25

Regulation of endocrine system. (I)

Lesson 26

Regulation of endocrine system. (II)

Lesson 27

Regulation of endocrine system. (III)

Lesson 28

Regulation of endocrine system. (IV)

Lesson 29

Physiology of reproduction. (I)

Lesson 30
Physiology of reproduction. (II)

7573 PUBLIC HEALTH

Unit 1. Introduction to Public Health
Lesson 1.1 HEALTH AND SICKNESS.
Concept of health-sickness and determinants. International organizations in the health field. Health for everybody in the 21st century.

Lesson 1.2 PUBLIC HEALTH AND COMMUNITY NURSING.
Public health, scope of action, historical evolution and health care models. Community health and community nursing.

Lesson 1.3 HEALTH-SICKNESS PROCESS.
Natural history of disease. Prevention levels.

Unit 2. Health Determining Factors
Lesson 2.1 ENVIRONMENT-ASSOCIATED FACTORS.
Relationship between health and ecology. Relationship of human beings with the environment.

Lesson 2.2 AIR POLLUTION.
Air pollution. Health repercussions.

Lesson 2. 3. WATER POLLUTION.
Water pollution. Health repercussions.

Lesson 2.4 GROUND POLLUTION. SOLID WASTE.
Ground pollution and waste management. Health repercussions.

Lesson 2.5 CLIMATE, FLORA AND FAUNA.
Climate, flora and fauna. Influence on health.

Lesson 2.6 FOOD.
Nutrition and health.

Lesson 2.7 BIOLOGICAL RISK.
Work and health. Biological hazards for healthcare workers. Standard precautions. Unemployment and health.

Lesson 2.8 HUMAN HABITAT.
Human habitat and health. Healthy habits.

Lesson 2.9 SOCIAL DETERMINANTS.
Social determinants. Social inequalities in health.

Lesson 2.10.A BIOLOGICAL DETERMINANTS: MICROORGANISMS.
Introduction and basic concepts. Taxonomy. Nomenclature and classification.
Bacterial morphology and structure. Bacterial growth. Factors intervening in the development of infectious diseases. Diagnosis of infections. Microbes in nature. Applications of bacterial flora of interest to humans. Gram-positive and gram-negative cocci, bacilli, anaerobic bacteria, mycobacteria and spirochetes.

Lesson 2.10.B BIOLOGICAL DETERMINANTS: VIRUSES.
Viruses: structure, classification, reproduction, genetics, diagnosis, prevention and treatment.

Lesson 2.10.C BIOLOGICAL DETERMINANTS: FUNGI.
Fungi: concept and general characteristics, pathogenic action, diagnosis and treatment.

Lesson 2.10.D BIOLOGICAL DETERMINANTS: PARASITES.
Parasites: protozoa, helminths, arthropods, diagnosis, prevention and treatment.

Lesson 2.11 FACTORS ASSOCIATED WITH HUMAN BIOLOGY.
Influence of human biology in people's health: genetic factors, life cycle and biological rhythms.

Lesson 2.12 LIFESTYLES.
Factors related to life styles. Concept, conditioning factors, characteristics and components. Difficulties in the adoption of a healthy lifestyle and objective of health-oriented behaviours.

Lesson 2.13 HEALTH SYSTEMS.

Health system models throughout the world: importance for the health of the population.

The Spanish health system.

Unit 3. Epidemiology, Prevention and Control of Health Problems

Lesson 3.1 EPIDEMIOLOGY OF CHRONIC HEALTH PROBLEMS.

Epidemiology and prevention of chronic health problems.

Lesson 3.2.A EPIDEMIOLOGY OF TRANSMISSIBLE DISEASES.

Introduction to epidemiology, epidemiological chain.

Lesson 3.2.B MECHANISMS FOR THE PREVENTION AND CONTROL OF TRANSMISSIBLE DISEASES.

B.1.Measures on the focus of the infection. Epidemiological surveillance.

B.2. Measures on transmission mechanisms.

Lesson 3.2.C HOSPITAL INFECTIONS.

Measures for the control and prevention of hospital infections.

Lesson 3.2.D Health promotion and disease prevention.

D.1 Health promotion: Concept. Scopes of action. Action strategies for healthy public policies. Promoting environments and healthy life styles.

D.2. Disease prevention. Types. Population screening for diseases.

Unit 4. Analysis of community health situations: bases for programming in health.

Lesson 4.1 ANALYSIS OF THE HEALTH SITUATION (A.H.S.).

Concept, objectives and methodology. Tools to measure health. Health indicators. Information sources. Identification of problems, determining priorities and health planning.

UNIVERSIDAD DE BURGOS

2nd year

7583 CLINICAL NURSING I

Unit 1. Nursing Care for Patients with Ingestion, Digestion, Absorption and Intestinal Evacuation Problems

Lesson 1. Assessment of Patients with Digestive Problems

Physical and functional characteristics of the digestive system. Assessment. Diagnostic studies.

Lesson 2. Alterations of the Upper Gastrointestinal Tract

Oral inflammations and infections. Oral cancer.

Alterations of the oesophagus: Achalasia. Gastroesophageal reflux disease. Hiatus hernia. Benign and malignant tumours.

Alterations of the stomach: Gastritis. Gastroduodenal ulcer.

Stomach cancer.

Lesson 3. Alterations of the Lower Gastrointestinal Tract

Alterations in intestinal transit: Constipation. Diarrhoea. Irritable bowel syndrome. Chronic inflammatory bowel disease.

Intestinal obstruction.

Diverticulitis.

Colon cancer. Ostomized patient.

Hernias.

Diseases of rectum and anus: Haemorrhoids. Anal fissure. Anorectal abscesses.

Anal fistulas. Pilonidal cyst.

Lesson 4. Acute Abdomen

Acute abdomen. Peritonitis. Acute appendicitis.

Lesson 5. Liver Alterations

Hepatitis.

Cirrhosis.

Liver cancer.

Lesson 6. Biliary Alterations

Cholelithiasis and cholecystitis.

Biliary cancer.

Lesson 7. Spleen Alterations
Pancreatitis.
Pancreatic cancer.

Unit 2: Nursing Care for Patients with Infectious Diseases and Alterations of the Immune System
Lesson 1. Assessment of Patients with Infections
Definition of infectious disease. Classification of pathogens.
Nursing assessment. General manifestations. Diagnostic and analytic tools.

Lesson 2. Infectious Diseases
Salmonellosis: Overview. Classification: gastroenteric and typhoidal.
Other.

Lesson 3. Alterations of the Immune System
AIDS. Definition, aetiology, epidemiology and transmission.
Clinical classification of AIDS. Nursing assessment. Treatment, prophylaxis and patient education.

Unit 3: Nursing Care for Patients with Problems Related to Sensory Perception: Tegumentary Alterations
Lesson 1. Assessment of Patients with Tegumentary Alterations
Skin structure. Skin functions. Assessment of dermatology patient.
Physical examination. Primary lesions. Diagnostic techniques and means.

Lesson 2. Infectious Alterations
Bacterial alterations: folliculitis, furuncles, anthrax. Viral alterations: herpes.
Fungal alterations: candidiasis.

Lesson 3. Dermatitis. Acne. Psoriasis
Clinical signs and symptoms, diagnosis, treatment.

Lesson 4. Skin Tumours
Classification. Benign tumours: keratosis, nævus and leucoplakia.
Neoplasias: melanoma, carcinoma, squamous cell and basal cell epithelioma.

Unit 4: Perioperatory Care

Lesson 1. Preoperatory Care

Preoperatory evaluation and surgical risk factors.

Preparation of patient for surgery.

Classification of surgery.

Lesson 2. Intraoperatory Care

Surgical Unit. Nursing actions in the operating room.

Monitorization and surgical positions.

General anaesthesia.

Regional anaesthesia.

Lesson 3. Postoperatory Care

Assessment, complications and care of patients in the immediate postoperative period.

Assessment, complications and care of patients in the short-term postoperative period.

7584 NURSING INFANTS AND ADOLESCENTS

BLOCK 1. INTRODUCTION TO NURSING IN CHILDHOOD AND ADOLESCENCE

Lesson 1. Childhood and Adolescence in the History of Humankind

- Childhood and adolescence in the different historical eras.
- Children's health throughout history.
- Current health situation in childhood and adolescence: developing countries, developed countries.

Lesson 2. Nursing in the Care of Children and Adolescents

- Caregivers throughout history.
- Scope of Nursing in childhood and adolescence.
- Current nursing care for children and adolescents.
- Nursing and health in childhood.

BLOCK 2. NURSING CARE OF HEALTHY CHILDREN AND ADOLESCENTS.

Lesson 1. The Family in the Care of Children and Adolescents

- Family-centred care.
- Nursing process in the care of children and their families.

Lesson 2. Characteristics of a Normal New-born

- Physical assessment of new-borns by nursing staff: general appearance, weight and measurements, skin, head, face, neck, thorax, abdomen, genitalia, anus, back, limbs.
- Functional assessment of new-borns by nursing staff: cardiopulmonary function, gastrointestinal function, urinary function, neurological function, immune system, thermoregulation.

Lesson 3. New-born Care

- Immediate nursing care: thermal environment, cardiorespiratory adaptation, assessment of condition in general: Apgar test, physical examination, specific prophylactic measures, starting breastfeeding, establishing affective bond, bonding.
- Follow-up nursing care: daily care of new-borns.
- Nursing care upon discharge: care continuity report at discharge, premature discharge.

Lesson 4. Assessment of Normal Growth and Development in Childhood

- Growth and development.
- Factors that intervene in growth and development.
- Characteristics of normal growth and development in infants, pre-schoolers, schoolchildren and adolescents.
- Nursing assessment of growth: anthropometric study, bone maturation.

Lesson 5. Psychomotor and Social Development in Childhood

- Nursing assessment of psychomotor development: in children, pre-schoolers and school age children.
- Assessment of gross and fine motor skills.
- Assessment of sensory and perceptual skills.
- Assessment of psychosocial development.
- Normal development of speech and language.

Lesson 6. Growth and Development in Adolescence

- Concepts of puberty and adolescence.
- Changes during puberty.
- Normal puberty variants.
- Secondary sexual characteristics.
- Nursing care in these stages.

Lesson 7. Nutrition in Childhood and Adolescence

- Nutritional requirements and energy needs in the different stages of childhood: new-born, infant, 1-3 years, 4-12 years.
- Promotion of healthy eating habits.
- Prevention of food-related problems: excess weight, obesity, eating behaviour.

Lesson 8. Children and Adolescent Care Services

- Children care services.

- Adolescent care services.
- Learning content.

BLOCK 3. NURSING CARE FOR CHILDREN AND ADOLESCENTS WITH HEALTH PROBLEMS

Lesson 1. Admission in Children and Adolescents

- Nursing care for admitted children.
- Reactions to admission according to development stages.
- Care strategies, use of games and creativity.
- Family care during admission and hospitalization.
- Care plan on admission and at discharge.

Lesson 2. Pain during Childhood

- Nursing assessment of pain in childhood.
- General actions of nurses in the presence of pain.
- Medical treatment of pain.
- Non-medical treatment of children's pain.

Lesson 3. Nursing Care in Paediatric Surgery

- Nursing care in preoperatory, intraoperatory and postoperatory stages in paediatric surgery.
- Outpatient surgery.
- Most frequent childhood alterations requiring surgical intervention.

Lesson 4. Digestive Disorders in Childhood and Adolescence

- Gastroenteritis and diarrhoea; vomiting and gastroesophageal reflux, dehydration, constipation, abdominal pain.
- Nursing care.

Lesson 5. Nutrition Alterations

- Excess weight, obesity.
- Eating disorders. anorexia and bulimia.
- Nursing care.

Lesson 6. Diabetes Mellitus in Children and Adolescents

- Clinical manifestations and complications of diabetes.
- Therapeutic approach and care of children and adolescents with diabetes mellitus.

Lesson 7. Urinary Alterations in Childhood

- General concepts.

– Urinary tract infection, vesicoureteral reflux (VUR), neurogenic bladder, sphincter incontinence, enuresis and encopresis.

- Nursing care.

Lesson 8. Respiratory Alterations in Childhood

- General concepts.

– Upper respiratory tract (URT) alterations: choanal atresia, foreign body in nose, epistaxis (nosebleed), URT infections, ear infections.
– Lower respiratory tract (LRT) alterations: bronchiolitis; pneumonia; asthma.
- Sleep apnœa.
- Nursing care.

Lesson 9. Cardiocirculatory Alterations in Childhood

- Congenital cardiopathies: acyanotic and cyanotic.
- Acquired cardiovascular diseases: endocarditis; myocardiopathies; rheumatic fever, Kawasaki disease.
- Nursing care.

Lesson 10. CNS Alterations in Childhood

- CNS infections: meningitis; encephalitis.
- Cephalea.
– Febrile convulsion.
- Congenital CNS abnormalities: neural tube defects. - Cleft spine.
- Nursing care.

Lesson 11. Exanthematic Diseases in Childhood

- Exanthema and other skin signs.
- Exanthematic diseases: measles, rubella, erythema infectiosum, sudden exanthema, chickenpox, canker-like rash.
- Non-exanthematic diseases. Parotitis, diphtheria.
- Nursing care.

BLOCK 4.

Lesson 1. Children and Adolescents at the End of Life

- Meaning of death during the different childhood and adolescence stages.
- Reactions to the process of death in children, adolescents and families.
- Nursing care in the dying process.

Lesson 2. Maltreatment in Childhood and Adolescence

- General characteristics and maltreatment risk factors in this stage.
– Physical maltreatment, physical neglect or negligence, sexual abuse, psychological maltreatment and emotional neglect, Munchausen syndrome or proxy syndrome.
– Prevention, detection and actions when facing children's maltreatment. Basic protection measures.

Lesson 3. Risky Behaviours in Adolescence

- Adolescence crisis or syndrome.
- Difficult adolescents and families.

– Prevention and early detection of risky behaviours in adolescence: suicide and suicide attempts, aggression and violence, racism and xenophobia, drug consumption and other addictions.
- Depressive alterations and anxiety. Fears, phobias and hyperactivity.

7585 PHARMACOLOGY

Unit 1. Basic Principles of Pharmacology

Lesson 0. Introduction to the Subject

0.1. Subject objectives. 0.2. Competencies to be acquired by student; 0.3. Distribution of teaching load; 0.4. Sample schedule; 0.5. Theoretical classes; 0.6. Practical classes; 0.7. Assessment systems; 0.8. Bibliography; 0.9. Time management.

Lesson 1. Introduction to Pharmacology

1.1. General concepts; 1.2. History of Pharmacology; 1.3. Origin of drugs; 1.4. Drug authorization; 1.5. Drug classification and nomenclature. 1.6. Drug forms; 1.7. Nursing and Pharmacology.

Lesson 2. Route of Administration

2.1. Introduction; 2.2. Enteral administration; 2.3. Topic administration; 2.4. Parenteral administration.

Lesson 3. Pharmacokinetics

3.1. Introduction; 3.2. Passage of drug through membranes; 3.3. Absorption; 3.4. Distribution; 3.5. Metabolism; 3.6. Elimination; 3.7. Pharmacokinetic concepts useful for Nursing practice.

Lesson 4. Pharmacodynamics

4.1. Introduction: variability in individual response; 4.2. Therapeutic index and safety; 4.3. Therapeutic responses: potency and efficacy; 4.4. Targets and pharmacological action; 4.5. Types of targets; 4.6. Changes in targets: physiopathologic aspects; 4.7. Factors modifying drug effects; 4.8. Next generation Pharmacology.

Lesson 5. Interactions, Adverse Reactions and Drug Poisoning

5.1. Interactions: introduction; 5.2. Interaction mechanisms; 5.3. Main interactions; 5.4. Main points for nursing; 5.5. Adverse reactions; 5.6. Pharmacovigilance; 5.7. Drug poisoning.

Lesson 6. Pharmacology and Nurse-Patient Relationship

6.1. Nursing process in Pharmacology; 6.2. Professional responsibility; 6.3. Safety principles; 6.4. Error detection and reporting; 6.5. Drug compliance.

Lesson 7. Nurse Prescription

7.1. Introduction; 7.2. Models for nurse prescription; 7.3. Nurse prescription in the international arena; 7.4. Legal aspects on nurse prescription in Spain; 7.5. Assessment of the situation in Spain; 7.6. Prescription in Andalusia; 7.7. Final thoughts.

Unit 2. Nervous System Medications

Lesson 8. Pharmacology of the Autonomous Nervous System

8.1. Physiology of the autonomous nervous system: 8.2. Sympathomimetic drugs; 8.3. Sympatholytic drugs; 8.4. Parasympathomimetic drugs; 8.5. Parasympatholytic drugs. Tuberculostatic drugs.

Antiseptic drugs. Antifungal drugs. Antiparasitic drugs. Antiviral drugs.

Lesson 9. Psychoactive Drugs

9.1. Introduction to CNS pharmacology; 9.2. Ansiolytic drugs: 9.3. Hypnotic drugs; 9.4. Antidepressants: 9.5. Neuroleptic drugs.

Lesson 10. Pharmacology of Epilepsy

10.1. Introduction; 10.2. Drugs suppressing sodium entry; 10.3. Drugs delaying sodium entry; 10.4. Drugs affecting GABA; 10.5. Drugs with multiple mechanisms of action; 10.6. Antiepileptic drugs in special situations;

Lesson 11. Pharmacology of Neurodegenerative Diseases

11.1. Physiopathology of Parkinson's disease; 11.2. Pharmacotherapy of Parkinson's disease; 11.3. Physiopathology of Alzheimer's disease; 11.4. Pharmacotherapy of Alzheimer's disease.

Lesson 12. Pharmacology of Pain and Anaesthesia

12.1. Introduction to pain; 12.2. Narcotic or opioid analgesics; 12.3. Nonsteroidal anti-inflammatory drugs (NSAIDs); 12.4. Local anaesthetics; 12.5. General anaesthetics.

Unit 3. Drugs for the Cardiovascular and Urinary Systems

Lesson 13. Drugs for Lipid Abnormalities

13.1. Introduction to lipid abnormalities; 13.2. Classification and mechanisms of action of lipid-lowering drugs; 13.3. Sequestering resins; 13.4. Fibrates; 13.5. Statins; 13.6. Nicotinic acid derivatives; 13.7. Cholesterol absorption inhibitors; 13.8. Other.

Lesson 14. Drugs against Heart Failure

14.1. Introduction to HF; 14.2. Classification of HF drugs; 14.3. Cardiac glycosides: digoxin; 14.4. Sympathomimetic drugs; 14.5. Phosphodiesterase inhibitors; 14.6. KATP channel activators; 14.7. Diuretics; 14.8. Angiotensin-converting-enzyme inhibitors/Angiotensin II receptor blockers; 14.9. β-adrenergic blocking agents (beta blockers); 14.10. Direct vasodilators.

Lesson 15. Drugs for Hypertension and Renal Failure

15.1. Physiopathology of hypertension (high blood pressure); 15.2. Treatment of hypertension; 15.3. Mechanisms of action of anti-HBP drugs; 15.4. Diuretics; 15.4. Adrenergic blocking agents; 15.6. Drugs affecting the renin-angiotensin system; 15.7. Calcium-channel blockers; 15.8. Peripheral vasodilators; 15.09. Physiopathology of renal failure; 15.01. Diuretic classification and mechanism of action; 15.11. High ceiling/loop diuretics; 15.12. Low ceiling/distal tubule diuretics; 15.13. Potassium-sparing diuretics.

Lesson 16. Drugs for Angina and Myocardial Infarction

16.1. Physiopathology of angina; 16.2. Treatment of angina; 16.3. Mechanisms of action of drugs against angina; 16.4. Organic nitrates; 16.5. β-adrenergic blocking agents (beta blockers); 16.6. Calcium-channel blockers; 16.7. Cause and treatment of myocardial infarction; 15.8. Medical treatment of myocardial infarction.

Lesson 17. Medications for Arrhythmias

17.1. Physiopathology of arrhythmias; 17.2. Mechanism and (Vaughan Williams) classification of antiarrhythmic drugs; 17.3. Class I: sodium-channel blockers; 17.4. Class II: β-blockers; 17.5. Class III: K-channel blockers; 17.6. Class IV: Calcium-channel blockers; 17.7. Other antiarrhythmic drugs.

Lesson 18. Drugs for Coagulation Abnormalities and Hematopoietic Disorders

18.1. Physiopathology of coagulation abnormalities; 18.2. Classification of drugs for haemostatic abnormalities; 18.3. Anticoagulant drugs; 18.4. Haemostatic or procoagulant drugs; 18.5. Physiology of haematopoiesis; 18.6. Physiopathology and pharmacology of anaemia; 18.7. Pharmacology of normocytic anaemia; 18.8. Pharmacology of iron-deficiency anaemia; 18.9. Pharmacology of macrocytic anaemia.

Lesson 19. Fluid Therapy

19.1. Introduction to fluid therapy; 19.2. Crystalloid solutions or electrolytes; 19.3. pH correcting solutions; 19.4. Colloidal or fluid replacement solutions.

Unit 4. Drugs for Respiratory and Digestive Systems

Lesson 20. Drugs for Allergic Rhinitis and the Common Cold

20.1. Physiology of the upper respiratory tract (upper airways); 20.2. Physiopathology of allergic rhinitis; 20.3. Preventive treatments; 20.4. Alleviating treatments; 20.5. Physiopathology of the common cold; 20.6. Antitussives; 20.7. Sputum-thinning drugs.

Lesson 21. Drugs against Asthma and other Lung Disorders

21.1. Physiology of the lower respiratory tract (lower airways); 21.2. Physiopathology and pharmacotherapy of asthma; 21.3. Physiopathology and pharmacotherapy of COPD; 21.4. Anti-inflammatory drugs; 21.5. Bronchodilators; 21.6. Inhalers and administration techniques.

Lesson 22. Drugs for Peptic Ulcer

22.1. Introduction to the digestive system; 22.2. Physiopathology and pharmacotherapy of peptic ulcer; 22.3. H2-receptor antagonists; 22.4. Proton pump inhibitors; 22.5. Antacids; 22.6. Antibiotics; 22.7. Other drugs.

Lesson 23. Drugs against Intestinal Disorders and other Digestive Alterations

23.1. Physiology of lower digestive system; 23.2. Physiopathology of constipation; 23.3. Pharmacotherapy with laxatives; 23.4. Physiopathology of diarrhoea; 23.5. Pharmacotherapy against diarrhoea; 23.6. Physiopathology of nausea and vomiting; 23.7. Pharmacotherapy of nausea and vomiting.

Unit 5. Immune System Drugs

Lesson 24. Pharmacology of Bacterial Infections

24.1. Introduction to pathogenic bacteria; 24.2. Antibacterial agents: concepts and mechanism of action; 24.3. Bacterial resistance; 24.4. Selection of an effective antibiotic; 24.4. Classification of antibacterial agents; 24.6. β-lactam antibiotics; 24.7. Aminoglycoside and other bactericidal antibiotics; 24.8. Bacteriostatic antibiotics; 24.9. Antituberculosis medications.

Lesson 25. Pharmacology of Fungal, Protozoan and Helminthic Infections

25.1. Introduction to fungal infections; 25.2. Systemic antifungal agents; 25.3. Topical antifungal agents; 25.4. Antimalarial agents; 25.5. Antiprotozoan agents; 25.6. Antihelminthic agents; 25.7. Anti-arthropod agents.

Lesson 26. Pharmacology of Viral Infections

26.1. Introduction to viral infections; 26.2. Classification of viruses and antiviral drugs; 26.3. Anti-herpesvirus drugs; 26.4. Anti-retroviral drugs; 26.5. Drugs against influenza; 26.6. Drugs against hepatic viral infections.

Unit 27. Drugs for Immune System Modulation

27.1. Introduction to immune response; 27.2. Vaccines: general concepts; 27.3. Anti-viral vaccines; 27.4. Anti-bacterial vaccines; 27.5. Sera; 27.6. Immunostimulants; 27.7. Immunosuppressors.

Lesson 28. Antineoplastic Pharmacology

28.1. Introduction to Cancer; 28.2. Cancer treatment; 28.3. Adverse effects of cytostatic drugs; 28.4. Cytostatic drugs acting on DNA, RNA and on protein synthesis; 28.5. Cytostatic drugs modulating hormone-regulated cell processes; 28.6. Immunologic mediators; 28.7. Support treatment; 28.8. Cytostatic drug administration; 28.9. Cytostatic drug extravasation.

Unit 6. Drugs for the Endocrine System

Lesson 29. Pharmacology of Endocrine Pancreas

29.1. Physiology of pancreas and diabetes mellitus; 29.2. Insulinic anti-diabetic drugs; 29.3. Non-insulinic (oral) anti-diabetic drugs; 29.4. New treatments.

Lesson 30. Hypophyseal and Thyroid Hormones. Corticoids

30.1. Neurohypophyseal hormones; 30.2. Adenohypophyseal and hypothalamic hormones; 30.3. Thyroid hormones; 30.4. Corticosteroids.

Lesson 31. Pharmacology of the Male and Female Reproductive System

31.1. Physiology of the female reproductive function; 31.2. Oestrogens; 31.3. Antiestrogens; 31.4. Progestogen; 31.5. Anti-progestogen; 31.6. Physiology of the male reproductive function; 31.7. Androgens; 31.8. Anti-androgens; 31.9. Treatment of erectile dysfunction; 31.10. Contraceptives; 31.11. Drugs for uterine dynamics.

Lesson 32. Pharmacology of Bone and Joint Disorders

32.1. Normal calcium and vitamin D physiology; 32.2. Diseases related with the calcium metabolism; 32.3. Pharmacotherapy of osteoporosis; 32.4. Joint diseases: rheumatoid arthritis; 32.5. Joint diseases: osteoarthritis; 32.6. Joint diseases: acute gouty arthritis.

7587 RESEARCH METHODOLOGY AND INFORMATION SYSTEMS

Unit I: Conceptual Phase of the Scientific Method

Lesson 0: Introduction

0.1. Introduction to the subject 0.2. Lessons versus workshops. 0.3. Distribution of lessons and workshops. 0.4. Group work and individual work (group formation). 0.5. Assessment systems (co-evaluation, hetero-evaluation). 0.6. Time management.

Lesson 1: Access to Human Knowledge

1.1. Sources of human knowledge; 1.2. Types of scientific research; 1.3. Importance and role of research in nursing; 1.4. History of research in nursing; 1.5. Research organization levels; 1.6. Research areas in nursing.

Lesson 2: The Scientific Method

2.1. Characteristics of the scientific method; 2.2. Phases of the scientific method; 2.3. Research protocols.

Lesson 3: Ethical Aspects of Research

3.1. History of bioethics; 3.2. Fundamental human rights and ethical principles for research in humans; 3.3. Legal and ethical regulations.

Lesson 4: Choosing a Research Problem

4.1. Sources for questions; 4.2. Characteristics of research questions; 4.3. PICO strategy; 4.4. Types of research questions. 4.5. Definition of hypothesis; 4.6. Classification of hypothesis; 4.7. Objectives: types and characteristics.

- Choosing a research problem workshop.
- Proposal of hypothesis and objectives workshop.

Lesson 5: Search for Information

5.1. Bibliographic data sources. 5.2. Search and recovery of health information. 5.3. Selection of relevant resources. 5.4. Citing sources. 5.5. Computer reference managers.

- Database search workshop.
- Mendeley reference manager workshop.

Lesson 6: Revision of Scientific Literature

6.1. Introduction; 6.2. Narrative revision; 6.3. Integrating or critical revision; 6.4. Panoramic or scoping review; 6.5. Conceptual analysis; 6.6. Systematic reviews; 6.7. Meta-analyses; 6.8. Structured vocabulary.

- Revision of scientific literature workshop.

Unit II: Methodological Phase of the Scientific Research Method

Lesson 7: Research Designs

7.1. Classifications of studies according to design; 7.2. Quantitative vs. qualitative research 7.3. Descriptive studies; 7.4. Observational analytic studies; 7.5. Pure experimental studies; 7.6. Quasi-experimental studies; 7.7. Qualitative studies: importance, theoretical and methodological approaches, and characteristics.

Lesson 8: Critical Reading and Evidence-Based Nursing (EBN) Practice

8.1. Introduction; 8.2. Phases of EBN; 8.3. Levels of scientific evidence; 8.4. Critical reading; 8.5. Systematic reviews and meta-analyses; 8.6. Clinical Practice Guidelines (CPG); 8.7. Leaflets; 8.8. Where to find evidence.

Lesson 9: Object of Study

9.1. Population and sample; 9.2. Choice of accessible population; 9.3. Calculation of sample size; 9.4. Sampling types; 9.5. Concept and type of variable; 9.6. Errors and measurement biases.

Lesson 10: Methods for Data Collection

10.1. Introduction; 10.2. Non-structured self-reports; 10.3. Validated questionnaires; 10.4. Cultural adaptation of validated questionnaires; 10.5. Creation and validation of questionnaires; 10.6. Collection of physiological data; 10.7. Collection of secondary data; 10.8. Qualitative data: observation, interview and discussion groups.

- Workshop on quantitative data collection methods.

Unit III: Empirical Phase of the Scientific Research Method

Lesson 11: Analysis of Results

11.1. Descriptive statistics; 11.2. Inferential statistics; 11.3. Qualitative data analysis.

- Workshop on statistical analysis.
- Workshop on qualitative data collection and analysis.

Lesson 12: Dissemination of Results

12.1. Types of articles; 12.2. Structure of manuscripts. 12.3. Elaboration of a research report: scientific style; 12.4. The publication process; 12.5. Main nursing scientific publications; 12.6. Presentation of results at conferences: communications and posters. 12.7. Ethics of scientific publication.

- Workshop on evaluation report.
- Workshop on scientific work evaluation.
- Workshop on presenting scientific work.

Lesson 13: Financing Research in Spain

13.1. Health science research in Spain; 13.2. National financing; 13.3. Regional financing; 13.4. Private financing; 13.5. European financing.

Lesson 14: Innovation and Transference of Research Results

14.1. Innovation in nursing. 14.2. Industrial (patented) property and intellectual property. 14.3. Office for the transference of research results.

7586 NUTRITION AND DIET THERAPY

Unit 1. NUTRITION

Lesson 1. Basics of Nutrition

Historical perspective and general aspects. Concept of nutrition and diet. Relationship between nutrition and other disciplines. General nutrition schedule. Food as source of nutrients and energy. Digestion. Functions of nutrients. Energy value. Nutrients and relationship with body composition.

Lesson 2. Diet and Nutritional Balance

Need, requirement and recommendation. Energy balance. Techniques to study energy expenditure. Food Composition Tables and Databases. Nutritional guides.

Lesson 3. Assessment of Nutritional Status

Assessment of nutritional status. Techniques for studying nutritional status. Assessment of food intake: national, family and individual surveys. Anthropometry and bioimpedance in diagnosing nutritional status.

Lesson 4. Nutrients and other Food Components

Carbohydrates, lipids, proteins, fibre, water, electrolytes, minerals and vitamins. Structure, classification and biological functions. Digestion, absorption and metabolism.

Differences according to source: natural and synthetic sources. Deficiencies and toxicity. Alcohol, nucleic acids, organic acids, antioxidants, etc. Potential and actual nutritional value of foods.

Unit 2. DIETETICS AND DIET THERAPY

LESSON 5. Introduction to Dietetics and Diet Therapy

General concepts and historical perspective.

Lesson 6. Individual Nutrition in the Different Stages of Life

Nutrition in healthy adults. Nutrition and fertility. Nutrition through the life cycle: gestation, breastfeeding, childhood, adolescence and old age.

Lesson 7. Nutrition as Pathology-Preventing Factor

Therapeutic diets. Enteral and parenteral nutrition. Nutrition in the prevention and treatment of diseases: malnutrition, excess weight and obesity, cardiovascular diseases, cancer, osteoporosis, diabetes, gastrointestinal diseases and other.

7588 CLINICAL NURSING II

Unit 1. Nursing Care for Patients with Haematological Problems

1. Assessment of patients with haematological problems.

1. Assessment.

2. Diagnostic studies.

Lesson 2. Haematological Disturbances

1. Red blood cells alteration: anaemias and polyglobulias.

2. White blood cells alteration: leukaemia, lymphomas and myelomas.

3. Haemostasis alterations: acquired haemorrhagic and coagulation disorders.

Lesson 3. Transfusion Therapy

1. Procurement of blood and blood products.

2. Blood Groups.

3. Blood transfusions.

Unit 2. Nursing Care for Patients with Respiratory Problems

Lesson 1. Assessment of Patients with Respiratory Problems

1. Assessment.

2. Diagnostic studies.

Lesson 2. Alterations of Upper Respiratory Tract

1. Upper respiratory tract infections: rhinitis, viral rhinitis (common cold), rhinosinusitis, pharyngitis, tonsillitis and adenoiditis, laryngitis.

2. Obstruction and trauma in upper respiratory tract: obstruction during sleep, epistaxis, nasal obstruction, nose fracture, laryngeal cancer.

Lesson 3. Alterations of Lower Respiratory Tract

1. Atelectasis.
2. Respiratory infections.
3. Acute respiratory failure.
4. Pulmonary embolism.
5. Lung cancer.
6. High lung artery pressure.

Lesson 4. Thorax Disorders

1. Pleural disorders.
2. Thorax disorders.

Lesson 5. Chronic Lung Diseases

1. Chronic obstructive pulmonary disease.
2. Bronchiectasis.
3. Asthma.
4. Cystic fibrosis.

Unit 3. Nursing Care for Patients with Vascular Problems

Lesson 1. Assessment of Patients with Vascular Problems

1. Assessment.
2. Diagnostic studies.

Lesson 2. Arterial Disorders

1. Occlusive arterial disease.
2. Aneurysms.
4. Aortic dissection.
5. Raynaud's disease.

Lesson 3. Vein Disorders

1. Varicose veins.
2. Chronic venous failure.
3. Venous thromboembolism
4. Leg ulcers.

Lesson 4. Lymphatic Disorders and Cellulitis

1. Lymphangitis and lymphadenitis.
2. Lymphedema and elephantiasis.
3. Cellulitis.

Lesson 5. High Blood Pressure

1. High blood pressure.

2. Hypertensive crisis.

Unit 4. Nursing Care for Patients with Heart Problems

Lesson 1. Assessment of Patients with Heart Problems

1. Assessment.
2. Diagnostic studies.

Lesson 2. Alterations of the Cardiac Electrical Function

1. Basic electrocardiography.
2. Cardiac arrhythmias.
3. Non-pharmacological treatment.

Lesson 3. Alterations of the Cardiac Pump Function

1. Ischemic cardiopathy.
2. Heart failure.
3. Acute lung oedema.
4. Pericardial diseases.
5. Endocarditis.
5. Valvulopathies.
6. Cardiomyopathies.

Unit 5. Nursing Care for Patients in Shock

Lesson 1. Shock

1. Types of shock.
2. Assessment of patients in shock.
3. Phases of shock.
4. Care of patients in shock.

7589 COMMUNITY HEALTH NURSING

UNIT 1 - PRIMARY HEALTH CARE

Lesson 1.1 - Primary health care (PHC): Principles and General Setting

1- Background and basis for PHC model.
2- Basic principles.
3- Conceptual elements.

Lesson 1.2 - Primary Healthcare in Spain: Origins, Structures, Characteristics, Regulations

1- Origins of PHC in Spain: outpatients' medical care.
2- PHC reform in Spain: Legal Framework.

3- Structure and organization of PHC in Spain: geographical and population scope; organization and functional structure.

Lesson 1.3 - The Healthcare Team

1- Concept.

2- Team work: justification, basic requirements, advantages and disadvantages.

3- Primary Care team (PCT): components, organization, action areas.

UNIT 2 - COMMUNITY NURSING

Lesson 2.1 - Community Nurses

1- Background. Evolution in Spain.

2- Concept and principles of community nursing.

3- Action areas.

4- Scope of action.

5- Healthcare modalities.

6- Healthcare organization modalities.

Lesson 2.2 Primary Healthcare Management. Resource Coordination

1- Informal care systems.

2- Sociosanitary coordination: principles, regulation, resources; case management system.

3- Continuity of care: definition, justification, elements and tools for continuity of care.

4- Liaison community nurse (LCN).

Lesson 2.3 Community Interventions and Community Participation (CP)

1- Concept of community.

2- Concept and justification of CP.

3- Elements and mechanisms of CP in Spain.

4- Difficulties of CP.

5- Community action for health improvement.

Lesson 2.4 - Direct Nursing Care

Lesson 2.4 - A Nurse's office.

1- Concept.

2- Objective.

3- Access systems.

4- Organizational models.

5- Methodology.

Lesson 2.4.B - Home care.

1- Justification.

2- Concept.

3- Objectives.
4- Modalities.
5- Home visit.
6- Methodology.
Lesson 2.4.C - Family care.
1- Justification.
2- Concept of family.
3- Family structure and system.
4- Family functions.
5- Family health.
6- Family intervention.
Lesson 2.4.D - Group work.
1- Justification.
2- Objectives.
3- Planning.
4- The operative group as model for group intervention in primary health care.

Lesson 2.5 Occupational Health

1- Concepts.
2- Occupational risk prevention.
3- Current legislation on occupational health.
4- Occupational nursing:
5- Preventive services in occupational health.
6- Specialization in occupational nursing: functions.

UNIT 3. COMMUNITY NURSING SERVICES

Lesson 3.1 Primary Healthcare Services in the National Health System (NHS)

1- Common NHS services.
2- Complementary services of autonomous communities.
3- Common services in Primary Healthcare.
4- Offer of nursing services in Primary Healthcare.

Lesson 3.2 Health Promotion and Disease Prevention Services

1- Promotion and prevention in Primary Healthcare services.
2- Primary prevention measures: immunizations.
3- General principles of immunization.
4- Characteristics.
5- Vaccine classification and production.
6- Immunization schedules.

7- Immunization in special situations.

Lesson 3.3 Children and Adolescents Care Services

– Promotion and prevention services in children and youth populations: children's immunizations: 0-14 years / Healthy child revisions: 0 – 23 months, 2 – 5 years, 6 – 14 years / Prevention of children's tooth decay / youth care and education.

– Attention in chronic processes: childhood asthma.

Lesson 3.4 Women Care Services

- Services for promotion and prevention in women: Maternal education services / First month post-partum visit services / Cervical cancer early diagnosis service / Breast cancer early diagnosis service / Gender violence female victims: early detection service.

- Women's Coping and adapting processes services:

Pregnant women care / Care for women during climacterium / Gender violence female victims care.

Lesson 3.5 Adult Care Services

- Adult promotion and prevention services: Triple vaccine immunization service / Hepatitis B immunization service for at-risk groups / Flue immunization service / Pneumococcal immunization service / Adult preventive activities service / Preventive activities service for people over 75 years.

- Chronic processes care services: Chronic patient care service: HBP Diabetes. COPD Obesity - Hypercholesterolemia / Care services for patients with dementia.

- Care services for adults with coping and adapting processes: Care for at-risk alcoholics / Smoking cessation / Care for at-risk elderlies / Home care for immobilized patients / Family caregiver's care / Chronic patient group education: diabetes / Health education for other groups / Caregiver groups health education.

Lesson 3.6 General Population Care Services

1- Care in acute processes and emergency situations.

2- End-of-life care.

UNIT 4. OCCUPATIONAL HEALTH.

Lesson 4.1 Occupational Health

1- Concepts.

2- Occupational risk prevention

3- Current legislation on occupational health.

4- Occupational Nursing:

5- Preventive services in occupational health.

6- Specialization in occupational nursing: functions.

7591 WOMEN'S HEALTH NURSING

HUMAN GESTATION. NURSING IN OBSTETRICS AND GYNECOLOGY SERVICES.

Lesson 1. Instauration of Pregnancy

Genetics. Gametogenesis. Fecundation. Early stages of embryonic development.

Lesson 2. Embryonic and Foetal Development

Foetal and foetal adnexa development. Foetal development and growth. Previable and viable foetus. Term foetus.

Lesson 3. Diagnosis of Pregnancy. Physiology of Gestation. Physical and Psychical Changes in Gestating Women

Biochemical, clinical and ecographic diagnosis of gestation. Physiology of gestation. Physical and psychical adaptation of women to gestation.

Lesson 4. Obstetrician's Office. Control of Gestation

Prenatal care. Care and control of gestation. Care for gestating women, nutrition, counselling and quality of life of gestating women.

OBSTETRICS PATHOLOGY - CARE FOR WOMEN AND/OR FOETUS WITH PATHOLOGIES

Lesson 5. Gestational Metrorrhagia

Diagnosis and treatment of metrorrhagia during pregnancy. Outpatient and inpatient control. Approach of Nursing towards bleeding during gestation. Anti-D isoimmunisation.

Lesson 6. Maternal Pathologies during Gestation

Pregestational maternal HBP. Preeclampsia and eclampsia.

Pregestational and gestational diabetes.

Social problems in gestation.

Lesson 7. Foetal Pathologies. High Risk Foetus

Threat of premature birth. Delayed intrauterine growth. Malformations in the foetus. Multiple or twin pregnancy

BIRTH. CARE FOR NORMAL AND PATHOLOGICAL DELIVERY

Lesson 8. Eutocic Delivery

Start of delivery. Recommendations for term gestating women. Elements involved in delivery. Periods of delivery. Pharmacology Care for eutocic delivery. Episiotomy. Foetal wellbeing.

Lesson 9. Instrumental Delivery. Delivery with Podalic Presentation - Multiple Delivery

Loss of foetal wellbeing. Forceps. Vacuum-assisted delivery. Spatulas. Indications Care for pelvic presentation. External cephalic version. Care for multiple vaginal delivery.

Lesson 10. C-Section

Indications of C-section. Preoperatory preparation. Surgical tech in C-section. Management of gestating women with prior C-section. C-section in multiple delivery.

Lesson 11. Preterm and Post-term Delivery Care - Labour Induction

Definition. Preterm gestation care: preterm delivery. Post-term gestation care. Labour induction: definition and management. Pharmacological and non-pharmacological means to induce labour.

Lesson 12. Analgesia and Anaesthesia during Delivery.

Analgesia and anaesthesia techniques during delivery. Pharmacological and non-pharmacological means. Indications and counter-indications. Complications. Nursing during intradelivery analgesia and anaesthesia. Nursing care.

PUERPERIUM.

Lesson 13. Physiological Puerperium

Concept and clinical characteristics of puerperium.

Nursing assessment and care.

Puerperal control.

Lesson 14. Pathological Puerperium

Nursing behaviour in puerperal pathology. Early postpartum haemorrhage.

Postpartum infections. Thrombotic risk in postpartum period. Alterations of behaviour and mood during postpartum period.

Lesson 15. Breastfeeding

Factors for the initiation and maintenance of breastfeeding.

Promoting and supporting breastfeeding.

Pathology of breastfeeding.

NURSING AND CARE FOR WOMEN IN THE PRIMARY CARE SERVICE - NURSING AT THE GYNECOLOGY SERVICE

Lesson 16. Women's Assessment at the Gynaecology Service - Female and Breast Cancer Screening

Gynaecology terminology. History of Gynaecology. Cervical and breast screening.

Basic gynaecological examination. Complementary tests.

Unit 17. Puberty

Physiology of puberty.

Care for adolescents with gynaecologic pathologies: alterations in menstrual intensity, period and cycle.

Approach of Nursing towards gynaecological pathologies in adolescence.

Lesson 18. Menstrual Cycle Alterations.

Amenorrhea. Dysmenorrhea. Premenstrual stress syndrome.

Abnormal uterine haemorrhages.

Amenorrhea. Dysmenorrhea. Premenstrual stress syndrome. Abnormal uterine haemorrhages.

Vulvovaginitis. Bartholinitis. Cervicitis. Pelvic inflammatory disease.

Sexually transmitted diseases. Definition. Transmission route. Primary and secondary prevention. Treatment. Nursing role in prevention of STI.

Lesson 20. Benign Pathologies of the Genital System

Fistulas. Prolapses. Bartholin gland. Benign vaginal tumour pathologies.

Benign cervical pathologies. Benign uterine pathologies: endometrial polyps, endometrial hyperplasias, adenomyosis, myomas. Benign pathologies of the Fallopian tube. Benign ovarian pathologies. Endometriosis.

Nursing in the gynaecological operating room. Surgical terminology.

Lesson 21. Benign Breast Pathologies

Breast examination. Complementary techniques for breast examination. Breast secretions. Mammary cysts. Papillary processes. Fibroadenomas.

Lesson 22. Menopause and Climacterium

Definition. Physiology. Physiological and pathological menopause. Signs and symptoms of menopause. Short, medium and long-term consequences of menopause.

Treatment of menopause. Indications and counter-indications.

Approach of Nursing towards women with physiological and pathological menopause.

GYNECOLOGIC ONCOLOGY

Lesson 23. Female Reproductive System Malignancies

Vulvar cancer. Vaginal cancer. Cervical cancer. Endometrial cancer. Ovarian cancer.

Nursing in the gynaecologic oncology operating room.

Lesson 24. Breast Malignancies

Breast cancer. Diagnosis. Surgery, chemotherapy, radiotherapy and hormone treatment. Nursing in the breast surgery operating room. Family breast cancer.

SEXUALITY AND REPRODUCTION

Lesson 25. Sexual and Reproductive Health - Contraception

Integral sexuality. Sexual and reproductive health.

Approach of Nursing towards contraception. Barrier methods. Hormonal contraceptives. IUD. Irreversible techniques. Emergency contraception.

Abortion.

Lesson 26. Infertility and Sterility - Assisted Reproduction Techniques

Study of sterile couples. Diagnosis of sterile couples. Causes of sterility. Assisted reproduction techniques. Risks of assisted reproduction techniques.

7592.-CLINICAL PLACEMENTS I

Block I

Demonstration room

Demonstration room.

Basic cures.

Removal of stitches and staples.

Basic bandaging.

Parenteral drug administration (except IV administration).

Block II

Clinical practical training in Admission Units

Objectives and activities are shown in the Practical training Guide.

At the admission units, students will develop the knowledge acquired during the theoretical-practical learning:

Measuring vital signs and anthropometric measurements.

Asepsis and antisepsis. Standard precautions.

Patient hygiene. Bed making.

Body mechanics. Mobilization of dependent patient.

Thermoregulation. Heat and cold application.

Oxygenation. Administering oxygen therapy: tubes, masks and humidifiers.

Urine elimination: bedpans, bottles, collectors and diuresis control.

Intestinal elimination: bedpans, sample collection.

Nutrition: knowledge of basic diets. Feeding assistance.

Dressings and bandages.

Preparation, administration and control of oral and parenteral medication (excluding IV).

Diagnostic procedures: ECG, capillary glycaemia, sample collection (except blood).

7590 PSYCHOPATHOLOGY AND MENTAL HEALTH NURSING

Unit 1. Introduction to mental health

Mental Health and Mental Illness.

- Concept of mental health and illness.
- Definition of Psychopathology.
- Revision of the history of Psychopathology.
- Incidence and prevalence.

- Prevention and intervention from Nursing.
- Current classification systems.
- DSM.
- CIE.

Unit 2. Mental Health Problems and Disorders

Neurodevelopmental Disorders

- Communication disorders.
- Autistic spectrum disorders.
- Hyperactivity/attention deficit disorder.
- Motor disorders.
- Nursing intervention.

Serious Mental Disorders

- Schizophrenia.
- Bipolar disorder.
- Nursing intervention.

Sleep Disorders.

- Dyssomnias.
- Parasomnias.
- Nursing intervention.

Emotional Disorders

- Anxiety disorders.
- Depression.
- Obsessive-compulsive disorder.
- Nursing intervention.

Eating Disorders

- Bulimia.
- Anorexia.
- Binge eating disorder.
- Nursing intervention.

Disruptive Disorders, Impulse Control and Behavioural Disorders

- Oppositional defiant disorder.
- Intermittent explosive disorder.
- Antisocial personality disorder.
- Nursing intervention.

Substance-Related Disorders and Addictive Disorders

- Alcohol-related disorders.
- Cannabis-related disorders.

- Other disorders.
- Nursing intervention.

➢ 3rd year

7593 CLINICAL NURSING III

Unit 1: Traumatic Musculoskeletal Disorders -
Nursing Care for Patients with Musculoskeletal Disorders.
Lesson 1
- Fractures.
- Sprains.
- Dislocations.

Lesson 2. Degenerative Alterations
- Osteoarthritis.

Lesson 3. Inflammatory Alterations
- Arthritis.
- Rheumatoid arthritis.

Lesson 4. Infectious Alterations:
- Osteomyelitis.
- Bone tuberculosis.

Lesson 5. Bone Tumour Alterations:
- Benign tumours. Classification. Clinical manifestations, diagnosis and treatment.
- Malignant tumours. Classification: primary: osteosarcoma. Secondary.

Unit 2: Nervous System Pathologies
Nursing care for patients with neurological problems.
Introduction: Anatomo-functional review.
Lesson 1. Patient in Comma
Etiopathogenesis. Assessment. Grades. Treatment.
Lesson 2. Epilepsy
Classification according to aetiology and clinical symptoms.
Phases of generalized epilepsy.
Diagnosis and treatment.
How to act facing a crisis.
Lesson 3. Parkinson's Disease

Etiopathogenesis. Clinical symptoms. Evolution. Treatment.

Lesson 4. Alzheimer's Disease

Etiopathogenesis. Phases. Clinical assessment and treatment.

Lesson 5. Cerebro-Vascular Disease.

Etiopathogenesis. Clinical symptoms. Evolution.

- Transient cerebral ischemia
- Brain infarction.

Lesson 6.- Brain Haemorrhage:

- Intra-cerebral.
- Subarachnoid.

Practical workshops/Seminars:

- Approximation to the neurological method.
- Neurologic semiology applied to stroke

Nursing care: bed-ridden patient with neurologic pathology.

Unit 3: Metabolic Diseases

Nursing care for patients with metabolic diseases.

Introduction: Anatomo-functional review.

Lesson 1.- Endocrinology

Thyroid pathology:

- Hyperthyroidism.
- Hypothyroidism.
- Thyroid cancer.

Adrenal gland alterations.

Lesson 2.- Endocrinology

- Diabetes Mellitus.

Etiopathogenesis. Types of diabetes. Clinical symptoms.

Acute complications: hypoglycaemia, diabetic ketoacidosis, hyperosmolar comma.

Chronic complications: micro and macroangiopathies.

Practical workshops/Seminars:

- Nursing care in diabetic patients.
- Diet therapy and Pharmacology in the patient with endocrine-metabolic pathologies.
- Education on diabetes.

Unit 4: Kidney and Urinary Tract Pathologies.

Nursing care for patients with renal and urinary function problems.

Introduction: Anatomo-functional review.

Lesson 1.- Kidney Failure:
- Acute kidney failure.
- Chronic kidney failure.

Lesson 2.- Renal Pathologies
- Glomerulopathies.
- Tubule-interstitial kidney diseases.

Lesson 3.- Kidney and Urinary Tract Infections.
- Pyelonephritis.
- Cystitis.
- Urethritis.

Lesson 4. Urinary Pathologies
- Urinary tract obstruction.
- Urinary lithiasis.
- Urinary tract tumours.

Practical workshops/Seminars:
- Renal replacement treatment: Renal transplantation.
- Nursing care in patients undergoing dialysis.
- Haemodialysis.
- Peritoneal dialysis.

Unit 5: Ocular Pathologies

Nursing care for patients with ocular pathologies.

Introduction: Anatomo-functional review.

Lesson 1.- Cornea Alterations.
- Keratitis.
- Corneal trauma.

Lesson 2.- Uveal Alterations.
- Uveitis.

Lesson 3.- Crystalline Alterations.
- Cataracts.

Lesson 4. Alterations of the Anterior Chamber.
- Glaucoma.

Lesson 5.- Eyelid Alterations.
- Blepharitis.
- Stye.
- Chalazion.
- Ptosis.
- Entropion.

- Ectropion.

Lesson 6.- Retinal Alterations.

- Retinal detachment.

Lesson 7.- Alterations of the Conjunctiva.

- Conjunctivitis.
- Pterygium.

Practical workshops/Seminars:

- Nursing care.
- Signs and symptoms of possible eye problems.
- Workshop on the senses

Unit 6: ENT Pathologies

Nursing care for patients with ENT pathologies.

Introduction: Anatomo-physiology review.

Lesson 1.- Main Alterations of the Outer Ear:

- Obstruction.
- Foreign body.

Lesson 2.- Main Alterations of the Middle Ear:

- Otitis.
- Otosclerosis.

Lesson 3.- Main Alterations of the Inner Ear (Internal Ear, Auris Interna):

- Menière's disease.

Lesson 4. Hypoacusia and Deafness.

Practical workshops/Seminars:

- Semiology of the ear (hypoacusia, Vertigo, Otalgia, Tinnitus, Otorrhea and other symptoms).
- Nursing care for patients with ENT pathologies.
- Workshop on the senses.

7594 COMMUNITY HEALTH NURSING AND HEALTH EDUCATION

TEACHING UNIT 1. METHODOLOGY

1. Health organization, administration and planning.
2. Community health diagnosis, methods and techniques.
3. Health programmes.

Castilla y León health programme.

Health planning.

4. Service portfolio II. Health care guides.

Organization of activities in primary healthcare teams: service portfolio and healthcare guides.

5. Nursing methodology.

Nursing methodology. Most frequently used nursing diagnoses, interventions and results in Family and Community Nursing.

TEACHING UNIT 2. NURSING CARE OF FAMILY AND COMMUNITY

1. Nursing care for families in crisis and risk situations.

2. Informal care in the family. Care of informal caregivers.

3. Home Nursing Care.

Introduction to Home Care. Home Care methodology. Home care for chronic and terminal patients.

4. Compliance.

Factors involved in non-compliance and compliance, assessment methods and nursing intervention strategies for improvement.

5. Nurse's office:

Nurse's office: evolution, modalities, activities.

TEACHING UNIT 3. COMMUNICATION

1. Communication.

2. Types of communication.

3. Factors affecting communication.

4. Characteristics of effective communication.

5. Communication and Nursing.

TEACHING UNIT 4. HEALTH PROMOTION AND EDUCATION

Lesson 1. Concept of Health Education.

General concepts for health education and promotion. Health promotion. Disease prevention.

Health Education. Health Education concepts, orientations and theoretical frameworks.

Lesson 2. The Role of Educators in Health. Integration of the Teaching-Learning Process in the Care Process.

Strategies for behavioural change.

Methods for health education: direct and indirect.

Lesson 3. Elaboration of Health Education Programmes.

Main risky behaviours: Description and specific actions in Health Education: Tobacco. Alcohol Drugs. Nutrition. Exercise. Compliance.

Lesson 4. Interventions and Programmes for Community Health Education.

Health Education Process. Assessment. Planning. General intervention Assessment.

Lesson 5. Group Health Education Programmes.

Production and use of educational materials.

Planning and evaluation in Health education.

7595 ACCIDENT AND EMERGENCY NURSING AND CRITICAL CARE

BLOCK 1. EMERGENCIES AND CRITICAL CARE

Health care in catastrophes.

Organization and healthcare in catastrophes and multiple-victim situations.

Comprehensive Emergency Systems.

Emergency systems, medical transports, material and methods to mobilize and to immobilize patients.

Vital support.

Basic and advanced vital support.

Initial actions in critical patients.

Acting in emergency situations of infectious, neurologic, cardiovascular, endocrine-metabolic, respiratory, and digestive origin.

Care for people with severe trauma.

Protocol for initial care of severe trauma. Protocol for massive transfusion.

Care for burned patients. Crush syndrome. Expansive wave lesions.

Initial care for intoxicated patients.

General aspects of emergency care for intoxicated patients, frequently used antidotes, specific care in frequent intoxications.

Practical workshops.

Basic and advanced CPR.

Care in severe trauma.

Material and methods for mobilization and immobilization.

Multiple victims care drill.

BLOCK 2. PALLIATIVE CARE

Lesson 1. Palliative Care Nursing

Introduction. Definition. Concept of terminal patient.

- Competences in palliative care nursing
- Objectives of PC professionals care.
- Basic tools to improve patient's quality of life and comfort.

Lesson 2. Most Frequent Symptoms in Terminal Patients

- General principles for symptom control.
-Pain. Analgesics. General principles.
- Digestive symptoms.
- Respiratory symptoms.
- Urologic symptoms.
- Neuro-psychiatric symptoms.

Lesson 3. Nursing Care for Terminal Patients

- Nursing and palliative care protocols.
- Nursing assessment
- Nursing diagnoses
- Care Planning

Characteristics of advanced and terminal situations in different subgroups of patients.

1.- Oncology patients.
2.- Patients with progressive non-oncology chronic diseases.
3.- Organ failure.
4.- Dementias and other neurological processes.
5.- Stroke.
6.- AIDS.
- Paediatric patients.

Lesson 4. Information and Communication with Patients and their Families.

- Definition.
- Objectives of communication.
- Components of communication.
- Non-verbal language.
- Listening.
- Communication skills.
- Knowledge of the truth.
- Bad news.
- Difficult questions.

Lesson 5. Family and the Grieving Process

- Family care.
- Family education and integration.
- Practical and emotional family support.
- Care and death at home.

- Care during agony.
- Phases of grieving process.

Lesson 6. Organization of Palliative Care (Pc)
- General principles of PC organization.
- Useful measures in existing health resources.
- Specific resources in PC.
- PC teams.
- PC Support teams.
- PC units.

Lesson 7. Emergencies in Palliative Care
- Obstruction of airways. Acute stridor.
- Malignant hypercalcemia.
- Upper vena cava syndrome.
- Medullar compression syndrome.

Febrile neutropenia.
Convulsive crises.
Haemorrhages.

ACUTE CONFUSIONAL STATE: DELIRIUM AND AGITATION - FAMILY CLAUDICATION CRISIS.

Lesson 8. Ethical Problems at End of Life
- Principles of Clinical Bioethics.
- Rights of terminally ill persons.
- End-of-life decisions.
- Relinquishing treatment.
- Informed consent.
- Relentless treatment.
- Euthanasia.

7596 CLINICAL PLACEMENTS II

Block 1. Demonstration Room

Gastric elimination-
Nasogastric intubation.

Gastric aspiration.
Gastric lavage.
Intestinal elimination.
Rectal intubation.
Applying enemas.
Urine elimination
Bladder intubation.
Bladder lavage.
Collectors.
Collection of blood samples.
Venous blood collection.
Intravenous treatment.
Peripheral catheter.

Block 2. Clinical Practice in Admission Units.
Objectives are shown in the Practice Guide.
At the admission units, students will put into practice the knowledge acquired during the theoretical-practical learning.
They will participate in activities carried out in the unit, including carrying out gastric, rectal, and bladder intubation, intravenous administration of medication, serum therapy and insertion of peripheral catheter.

7597 NURSING CARE FOR THE ELDERLY AND CARE FOR DEPENDENT ADULTS

Unit I: BACKGROUND AND CONCEPTS
Lesson 1. Historical Evolution of Elderly Care
The elderly and their care: historical and cultural vision. Anthropology of care.
Lesson 2. Geronto-Geriatric Nursing
Concept of gerontology and geriatrics.
Geronto-geriatric nursing.
Lesson 3. Epidemiology and Demographics of Ageing
Population ageing: concept, measurement units, causes and consequences.
Epidemiology of ageing.
Lesson 4. Process and Theories on Ageing
Basic concepts of ageing.
Theories of ageing (biological, psychosocial).

Unit II: GERONTOLOGY

Lesson 5. Physiological Changes Associated with the Ageing Process

Structural and functional changes associated with ageing in the different organs and systems of the human body.

Lesson 6. Psychological Changes Associated with the Ageing Process

Changes in personality, cognitive functions and affectivity related to ageing.

Lesson 7. Sociological Changes Associated with the Ageing Process

Self-image and psychosocial profile.

Retirement.

Cohabitation models.

Participation and activities for the elderly.

Lesson 8. Comprehensive Assessment

Concept and characteristics.

Clinical, functional, mental and social assessment.

Assessment tools.

Unit III: GERIATRICS

Lesson 9. Repercussion of Ageing Process on Basic and Instrumental Needs

Virginia Henderson's model: 14 needs.

Basic needs: independence – dependence.

Nursing process.

Lesson 10. Characteristics of Geriatric Diseases

Peculiarity of symptoms.

Fragility and disease.

Most prevalent pathologies in the elderly: cardiovascular, respiratory, cerebrovascular, osteoarticular and surgical.

Lesson 11. Great Geriatric Syndromes

Concept and common characteristics.

Immobility, falls, urinary incontinence, malnutrition, confusion syndrome, constipation, faecal incontinence, insomnia, depression, etc.

Lesson 12. Medication in Geriatrics

Pharmacokinetic and pharmacodynamic modifications.

Consequences, assessment and care related to polymedication, self-medication and lack of compliance.

Lesson 13. Main Cognitive Processes Associated with Ageing

Most prevalent cognitive processes.

Disorders and dementias.

Lesson 14. Maltreated Elderly

Concept of maltreatment and types.
Maltreatment of the elderly within the family setting.
Maltreatment of the elderly in residences.
Nursing role.

Lesson 15. Nursing Care for the Elderly at the Terminal Stage

Principles of end-of-life care.
Approach to common and worrying symptoms.
Care in agony and mourning.

Lesson 16. Care for Caregivers of the Elderly

Concept of caregiver.
Comprehensive care for caregivers.
Health education.

Unit IV: GERONTO-GERIATRIC CARE

Unit 17. Main Care Resources for the Elderly

Gerontologic organization.
Home care services.
Residence services, types.

Lesson 18. Ethical and Legal Aspects of Care for the Elderly

Main ethical problems in the care for the elderly.
Nursing Code of Ethics.

Lesson 19. Dependence Care

Concept of dependence, levels and degrees.
Legislation in force.

Lesson 20. New Perspectives on Care and Research in the Gerontological Setting

Evidence-based nursing in care for the elderly.
Lines of research.

7598 NURSING MANAGEMENT. NURSING QUALITY MANAGEMENT

HEALTH SYSTEMS

Elements Defining a Health System

- Health system - Health services.
- International perspective on health systems.
- The Spanish health(care) system.

Economy and Health

- Peculiarities of the health market. Variables for analysis.
- Challenges and proposals for the improvement and evolution of health systems.

The Spanish Health System
- Evolution of the Spanish model.
- New management proposals.

ADMINISTRATION PROCESS - NURSING: CARE PLANNING AND ORGANIZATION

Administration and Health Services
- Administration as Science. Evolution.
- Healthcare administration and its processes.
- Administration, human resources and development of the nursing profession.

Healthcare Planning
- Healthcare planning stages.
- Healthcare planning types and methods.
- Planning techniques.

PATIENT SAFETY

Care Safety
- Basic concepts.
- Error, incidents, adverse effects.
- Reporting systems.

Strategies for the Improvement of the Quality of Patient's Safety
- SENECA.
- ENEAS.

Projects for the Improvement of Patients' Safety
- Bacteriemia Zero (Zero Bacteriemia).
- Neumonía Zero (Zero Pneumonia).
- Infección quirúrgica Zero (Zero Surgical Infections).
- Other.

Health Service Accreditation Systems
- Quality of health and main accreditation systems.
- IHAN.
- Joint Commission.

- RNAO
- Other.

QUALITY MANAGEMENT

Development of Service Quality Improvement Plans

Service Quality Assessment Methodology

7599 CLINICAL PLACEMENTS III

Block 1.- Demonstration Room

Collection of Blood Samples II

Arterial blood gas analysis.
Intravenous treatment.
Venous catheter.
Central vein pressure.
Wound dressing.
Complex wound dressing, infected dressings, wound debridement.
Dressings and immobilization devices.
Special dressings. Immobilization.
Specific techniques.
Aspiration of secretions.

Block 2.- Clinical Practice in Admission Units

Objectives and activities are shown in the Practical training Guide

At the admission units, students will put into practice the knowledge acquired during the theoretical-practical learning.

They will take part in the activities of the units, joining in the performance of procedures such as arterial blood gas analysis, wound debridement, aspiration of secretions or insertion of intermediary intravenous catheter.

7600 RARE DISEASES

Introduction to Rare Diseases

Delimitation, concepts and terminology.
Rare disease classification systems.
Rules and legislation in the orphan drug setting.

Institutional Context and Policies Applied to Rare Diseases

Strategy on rare diseases from the National Health System.
Research centres and reference centres for the research and care of patients with rare diseases.
National Reference Centre for People with Rare Diseases and their Families in Burgos.

Social and Healthcare of People with Rare Diseases and their Families

Clinical cases.
Nursing care.
Social and health interventions.

7602 HEALTH AND GENDER

BLOCK I. Gender Perspective in Health: Gender as Determinant in Health.

Teaching Unit I:

General concepts. Sex-gender system in health.

Teaching Unit II:

Differences and inequalities in the ways men and women fall sick. Gender biases in healthcare: diagnostic, therapeutic and clinical research biases. Health indicators according to gender: life expectancy and mortality. Differential morbidity: chronic disorders, mental health, caregivers' health, sexual and reproductive health.

Teaching Unit III

Incorporating gender perspective in health policies and programmes:
Access to healthcare services based on gender. Equal opportunities in healthcare services.

Teaching Unit IV

Gender and health professions.

BLOCK II: Gender from a Multicultural Perspective

Teaching Unit V

Gender as product of interrelations among biological, social and cultural aspects.

Teaching Unit VI

Body and health perceptions according to the culture of reference.

Teaching Unit VII

Transcultural healthcare models.

BLOCK III: Gender Violence in the Health System

Teaching Unit VIII

Basic concepts: concept and origin of gender violence, epidemiological aspects, forms of violence, cycle of violence, causes of gender violence, risk and protection factors, characteristics of aggressors and victims, myths and stereotypes, physical, psychological and social consequences of maltreatment.

Teaching Unit IX

Comprehensive prevention, early detection, intervention, help, assistance and rehabilitation measures for victims of gender violence. Legal measures and resources: educational measures, informative measures, welfare assistance, legal assistance, working rights, economic measures and protection orders.

Teaching Unit X

Health care protocols. Interventions from nursing.

7603 PHYSICAL ACTIVITY AND COMPLEMENTARY THERAPIES IN HEALTH CARE

- Physical activity and its relationship with health from a comprehensive approach as source of wellbeing.
- Physical activity in the promotion of health. Prevention of risks and musculoskeletal lesions in physical activity.
- Healthy physical activity habits.
- Health-oriented physical conditioning. Special conditions.

➢ 4th year

7605 CLINICAL PLACEMENTS IV

Clinical practice

Workshops and seminars.

A suture workshop will be held in the demonstration room at the school.

An ICU seminar and an Emergency services seminar will be held during the rotation for each of the services.

Clinical rotations

Attend practices at Healthcare Centres, Intensive Care Units (ICU) and Hospital Emergency Service Units.
Students will take part in all activities taking place at each of the centres or service units.
In Primary Care, emphasis will be laid on interventions such as home care, nursing office and working in groups, as well as procedures such as chronic wound healing, dressing, drainage, wound sutures, splints, subcutaneous reservoir management, spirometry and others. The student will hold a clinical session for the team in primary care.
In the Emergency and Intensive Care units, emphasis will be on interventions such as: monitoring of critical patients, care for patients with assisted respiration/ventilation and procedures such as endotracheal aspiration, use of defibrillators and monitor readings (ECG, intracavitary pressures).

7606 CLINICAL PLACEMENTS V

Clinical practice
Operating room seminar
Content linked to the development of clinical practices in this unit. They will be held by all students.

Clinical rotations
It comprises three modules:
a) a module in clinical-surgical or maternal-children units;
b) two modules at choice among the following services or units:
operating room, mental health, geriatric centres or special care units.
Students will take part in all activities carried out in the unit in which they are doing their practices.

7607 FINAL DEGREE'S PROJECT

End of Degree Paper: Individual Tutorials
Individual Tutorials

The individual tutorial will serve to guide student when preparing their EDP, including fulfilling ethical considerations. Tutors may obtain advice from other teachers when developing the EDP topic, if they consider it appropriate.

These tutorials will serve to establish the EDP specifications, and the work calendar, deliverables, if there are any, taking into account that the set objectives need to be achievable within the established time frame.
The number of individual tutorials will vary and will be enough for the follow up and assessment of the EDP.
Individual tutorials will serve as the basis for the tutor to fill in the continuous assessment form, as well as the favourable report necessary for the presentation and oral defence. They will also serve as the basis for the student's self-report assessment.

End of Degree Paper: Group Tutorials
A variable number of group tutorials shall be established in which the general aspects of the EDP shall be explained: rules and EDP manual, types of EDP, style guide, planned deadlines, workshops, etc.
Group Tutorial 1: General Aspects about the EDP
This workshop aims to inform 4th year students on the basic aspects of the EDP, mainly the following:
- Presentation of the subject and results from previous years.
- Basics of time management.
- Presentation of subject's manual.
- Explanation of the different types of EDP admitted.
- Subject's scheduled calendar.
- Ethical and legal aspects to be considered.

Group Tutorial 2: Search in Specific Health Science Databases and the Mendeley Bibliography Manager
The purpose of this workshop for the students to:
- Know the main databases, catalogues, international publications... specific for nursing and other health sciences, which are key to collect the bibliography needed for the EDP.
- Know the basic rules for creating bibliography in the EDP, as well as for quoting other works, quotation styles and learning how to use a bibliography reference manager such as Mendeley.
This will be held in association with Burgos University Library.

Group Tutorial 3: IT Tools Useful for the Development of the EDP

This workshop will briefly describe several IT tools that may be useful for the development of the EDP:

- styles for Office Word: to ease adaptation to the EDP style guide.

- Google Drive: Googledocs, Googlesheets, Googleslides and Googleforms: put together in Google Drive, they allow collaborative work, preparing online surveys...

Group Tutorial 4: Introduction to the Transference of Research Results

The purpose of this workshop for the students to:

- Acquire notions of what is the transfer and protection of results (intellectual property and industrial property: patents, utility models, designs, trademarks and marks), as well as the usual processes for requesting patents (Spanish, European...).
- Learn about the work done by the Research Result Transfer Office (OTRI) of Burgos University (idea competitions, spin offs)...
- Know examples of patents and IT apps within nursing.

This will be held in collaboration with University of Burgos' OTRI staff.

Group Tutorial 5: Notions for Quantitative Analysis of Data

This workshop will briefly review concepts such as experimental designs, population and sample, sample size, variable concept and type, descriptive statistics, inferential statistics...

End of degree paper: Individual work

Individual work

The EDP requires students to prepare a project, memo or study in which they apply and develop the knowledge acquired during the degree study. It shall be focused on applying competences associated with the degree programme. It will be carried out individually under the supervision of a tutor.