

## Course Degree in Nursing

Teaching: NURSING IN CLINICAL MEDICINE, SURGERY AND PHARMACOLOGY

SSD Insegnamento: bio/14, med/41, med/18, med/09

Numero di CFU: 4

Nome docente responsabile: Anselmo Caricato

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orario di ricevimento (previo appuntamento): martedì dalle 15 alle 16

Module: ANESTHESIOLOGY

SSD Course: MED/41

Credits: 1

Professor's Name: Anselmo Caricato

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office hours (by appointment) tuesday from 15 to 16

Module: GENERAL SURGERY

SSD Course: Med/18

Credits: 1

Professor's name: Roberto Verzaro

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Module: PHARMACOLOGY

SSD Course: BIO14

Credits: 1

Nome docente: Emanuele Nicastrì

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Module: INTERNAL MEDICINE

SSD Course: MED 09

Credits: 1

Professor's Name: CELESTINO SARDO

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#### PREREQUISITES

- Knowledge of the basic notions of human anatomy, human physiology and human pathology of the main diseases of international interest.
- Knowledge of technique and timing of most important surgical procedures
- Basic knowledge of the main definitions of clinical pharmacology

#### LEARNING OBJECTIVES

Aim of the Teaching is to provide students with knowledge on:

- General and peripheral anesthesia
- Monitoring in Intensive Care Unit
- Organ failure. Physiopathology and treatment
- Mechanical ventilation
- Extracorporeal removal techniques
- The patient in shock
- Stupor and coma
- the main pathologies of surgical interest by ensuring that at the end of the course the student is able to describe the fundamental aspects of the assessment and preparation of the person for surgery
- to identify the main post-operative complications and related prevention measures and to describe the metabolic and functional changes in the post-operative phase
- describe the epidemiology, prevention measures and early diagnosis; etiopathogenesis and pathophysiology, main diagnostic investigations, signs and symptoms typical of the pathological picture and possible complications, specific monitoring in relation to the type of surgery and describe the follow-up programs and the principles of rehabilitation in relation to the type of pathology and surgical treatment
- basic principles of clinical pharmacology and in particular, notions of pharmacokinetics and pharmacodynamics and absorption mechanisms
- classify the active substances according to their composition and specificity of action
- physiopathological and diagnostic bases of pathologies of greater interest and internal frequency are essential goals. In this context the teaching of nursing practice and of the best and optimal approach to the patient with multi-factoriality of risk and multi-pathologies will be decisive.

#### LEARNING OUTCOMES

knowledge and understanding

At the end of the course the student will be able to:

- Collaborate with the anesthesiologist in the main phases of general and peripheral anesthesia

- Management of a patient in Intensive Care Unit. Monitoring and treatment
- manage the surgical patient and some of the pathologies related to the surgical field. The course provides the theoretical knowledge useful for the planning of a safe nursing assistance based on scientific evidence through the application of nursing process.
- Knowledge of the basic principles of clinical pharmacology, pharmacokinetics and pharmacodynamics and of the main classes of drugs
- to know the basic notions of clinical pharmacology, the main classes of drugs, and the history of the drug
- basic knowledge of the history of ancient and western modern pharmacology.
- describe the mechanisms of action, efficacy and adverse reactions of the main classes of drugs, in particular, anti-inflammatories and analgesics, antibiotics, antiparasitics, antifungals, antivirals.
- to know all the main phases of the pathophysiology of the major and most frequent diseases of Internal Medicine.  
to know the criteria of clinical diagnosis of the major and most frequent diseases of Internal Medicine.  
know the criteria for instrumental diagnosis of the major and most frequent diseases of Internal Medicine.  
know the criteria for laboratory diagnosis of the major and most frequent diseases of Internal Medicine.  
know the pharmacological and therapeutic applications of the major and most frequent diseases of Internal Medicine.  
know the combined nursing and medical management paths in the management of patients suffering from internal pathology.

#### Applying knowledge and understanding

At the end of the course the student will be able to:

- describe the fundamental aspects of the pathological conditions envisaged by the program, in relation to the different clinical-assistance pathways.
- judge the basic efficacy and toxicity of the main drug classes
- use the knowledge acquired for the in-depth study of aspects relating to the specific field to which the student will dedicate himself in the professional activity.

#### Communication skills

*At the end of the course the student must be able to:*

- communicate with the patient about his / her skills in the field of diseases that require a surgical approach
- be able to present historical notes on pharmacology, basic principles of pharmacokinetics and pharmacodynamics of the main classes of drugs
- use specific scientific terminology appropriately

## Making judgements

*At the end of the course the student must be able to:*

- assess the condition of a patient admitted to a general surgery department
- know the difference, efficacy and toxicity between drugs belonging to the same pharmacological classes.
- carry out general assessments on the topics covered

## COURSE SYLLABUS

- Preparation of environment and patient to surgical procedures
- Use of anesthetics. Management of preanesthesia phase.
- Intra and post-surgical phase
- Management of central and peripheral venous lines and surgical drainages
- Management of surgical wounds and post-surgical pain.
- Monitoring in Intensive Care Unit
- Organ failure. Physiopathology and treatment
- Mechanical Ventilation
- Extracorporeal removal techniques
- The patient in shock
- Stupor and coma
- MANAGEMENT OF THE SURGICAL PATIENT
- SHOCK
- ACUTE ABDOMEN
- SURGICAL WOUNDS
- DEEP VENOUS THROMBOSIS
- SURGICAL DRAINAGE
- SURGICAL INFECTIONS
- COMPLEX TRAUMAS
- BREAST DISEASES
- history of ancient and modern pharmacology
- basic principles of clinical pharmacology
- pharmacokinetics and pharmacodynamics and absorption mechanisms
- classification of the active substances according to their composition and specificity of action
- mechanisms of action, efficacy and adverse reactions of the main classes of drugs, in particular, anti-inflammatories and analgesics, antibiotics, antiparasitics, antifungals, antivirals.
- pharmacokinetic and pharmacodynamic basic principles of antiviral agents and specific treatment for COVID-19 patients
- Introduction to the pathophysiology of the main internist pathologies: diabetes mellitus, systemic arterial hypertension, stable and unstable coronary heart disease. The

pathophysiological aspects of each pathology will be treated with particular interest in clinical, instrumental and laboratory diagnostic pathways for each pathology. Finally, the pharmacological and interventional therapeutic process will be evaluated for each pathology treated, and the function of the nurse in the path of care of the affected patient.

#### COURSE STRUCTURE

The module of Anesthesiology is structured in frontal interactive lessons for a total of 14 hours

The module of Pharmacology is structured in 14 hours of frontal/interactive lessons.

The module on General Surgery is structured in traditional lessons, group work, group work presentations, home work

The module of Internal Medicine is structured in 14 hours of lectures divided into lessons of 2 to 4 hours based on the academic calendar. Lectures will include theoretical lessons and supplementary seminars on the topics covered.

#### COURSE GRADE DETERMINATION

The exam of the Teaching of Clinical Medicine, Surgery, Pharmacology is comprised of an oral exam of ANESTHESIOLOGY, PHARMACOLOGY, GENERAL SURGERY, INTERNAL SURGERY, whose mark is an integral part of the Teaching.

The knowledge and ability to understand, the ability to apply knowledge and understanding, the autonomy of judgment and the communication skills of the student will weigh in the final score as follows 30%, 30%, 30% and 10%, respectively.

#### OPTIONAL ACTIVITIES

- Advanced simulation
- Optional activities with frequency at the Department of Hepatobiliary Surgery and Transplantation of the Tor Vergata Hospital in Rome
- Individual study, group work, and home work on particular topics.
- Opportunity to participate in seminars, research internships, department internships and monographic courses.

The topics of the activities are not subject to examination. Acquisition of the hours allocated occurs only with a mandatory frequency of 100% and suitability is provided.

#### READING MATERIALS

- AACN Essentials of Critical Care Nursing, 4th Ed. Authors: S. Burns, S. Delgado McGraw Hill Editor
- Critical Care Nursing: Science and Practice di Sheila Adam, Sue Osborne, e al. OUP Oxford Ed
- Assistenza infermieristica in anestesia. Giorgio Torri, Elena Moizo. Antonio Delfino Editore

- L'infermiere strumentista. Procedure in chirurgia specialistica Alessandro Peruzzi Elsevier Masson Editore
- Guida al monitoraggio in area critica.GD GiustiMaggioli Editore
- Oh. Manuale di terapia IntensivaBersten AD, Soni NElsevier Masson Editore
- COMPENDIO DI CHIRURGIA per le professioni sanitarie (Giuseppe Sica – Universitalia)
- OXFORD HANDBOOK OF SURGICAL NURSING (Alison Smith)
- Basic pharmacology book as Goodman & Gilman's The Pharmacological Basis of Therapeutics
- Textbook by Alfred G. Gilman, Alfred Gilman Sr., and Louis S. Goodman, slide sets and original articles from selected international journals
- Dennis L. Kasper, Anthony S. Fauci, Dan L. Longo. "Harrison. Principi di medicina interna. "Casa Editrice Ambrosiana. Distribuzione esclusiva Zanichelli; 2016; 19 edizione.