

SCIENZE MEDICHE E PRIMO SOCCORSO (APU004)

1. language

Italian.

2. course contents

Coordinator: Prof. FIORINELLI MASSIMO

Year Course: 1

Semester: 2°

UFC: 5

Modules and lecturers:

- CHIRURGIA GENERALE (APU043) - 1 cfu - ssd MED/18 - Prof. Vincenzo Perri
- FARMACOLOGIA (APU042) - 1 cfu - ssd BIO/14 - Prof. Giovanna Petrucci
- MEDICINA D'URGENZA (APU044) - 2 cfu - ssd MED/18 - Prof. Gianluca Franceschini
- SCIENZE INFERMIERISTICHE GENERALI E PEDIATRICHE (APU045) - 1 cfu - ssd MED/45 - Prof. Massimo Fiorinelli

3. bibliography

Pharmacology:

Clark M.A., Finkel R., Rey J.A. "Le basi della farmacologia". Ed.2. Bologna: Zanichelli Editore; 2013. ISBN-13: 978-8808188649. *(Optional)*

Teaching material (handouts, slides) provided by the Professor.

General surgery:

Teaching material (handouts, slides) provided by the Professor.

Emergency medicine:

Manuale di medicina d' emergenza. di Della Corte - Enrichens - Olliveri – Petrino (Optional)

Medicina d'urgenza notes. Guida clinica. J. Jones , B. Fix , F. E. Agrò, R. Cataldo) (Optional)

Manuale di Medicina di Emergenza Urgenza - Edizioni EDRA. www.edizioniedra (Optional)

Manuale di Primo Soccorso - Ordine dei Medici di Bolzano.

[www.ordinemedici.bz.it/.../26082014_manuale%20di%20primo%20soccorso.pdf]

Il primo soccorso. leotardi.ddns.info/html/primosoccorso/primosoccorso.php

Linee Guida ERC 2015 - IRC - Italian Resuscitation Council.

old.ircouncil.it/www.ircouncil.it/files/.../2016-05-03%20ERCLG2015_ITA%20def.pdf

General and pediatric nursing:

Teaching material (handouts, slides) provided by the Professor.

4. learning objectives

Knowledge and understanding (Dublin 1):

The student will know the definitions and fundamentals of each topic treated, showing that they have understood the defining elements, including: physiology and conditions of normality, major changes in the state of normality and process of etiopathogenesis, risk factors, preventive, diagnostic and therapeutic tools and interventions.

At the end of the Teaching the student will have acquired the basic knowledge related to/will be able to:

- *Therapeutic indications and mechanisms of action of the main classes of drug, fundamentals of pharmacokinetics and pharmacodynamics, meaning of "therapeutic effect" and "side effect/adverse effect", bases of pharmacological research and pharmacovigilance;*
- *Definition, main characteristics, basic management, related to: traumas, fractures, laceration-contuse wounds, surgical wound, burns, asepsis, wound healing, pressure injuries (LDP), vascular accesses (central and peripheral), cardio-pulmonary resuscitation techniques (CPR) and Basic Vital Function Support (BLS), measurement and interpretation of basic vital parameters, modalities for the main clinical and Community diagnostic tests;*
- *Recognize a health emergency, know the role of the rescuer, the alert mode of the rescue system, the rescue chain, its activation and execution and the regulatory and medical-legal information related to it.*

Applying knowledge and understanding (Dublin 2):

The student will be able to integrate the theoretical knowledge acquired on the management of the patient with trauma or in an emergency/emergency situation identifying the most relevant active problems according to a priority criterion (urgency/emergency). It will therefore be able to use the appropriate tools and implement the most appropriate procedures for the management and treatment of the individual case on the basis of the actual clinical needs and its specific responsibilities.

Making judgements (Dublin 3):

- *The student will demonstrate to have developed autonomy of judgment on medical-surgical emergencies through acquisition of decision-making autonomy relating to the need for intervention and alert of advanced relief;*
- *The student will be able to describe the basic techniques and tools used for the diagnosis and the critical and objective evaluation of the interventions to be implemented.*

Communication skills (Dublin 4):

The student will be able to present the topics of interest clearly, using the shared and

internationally recognized medical and technical/scientific terminology, in order to communicate effectively with the professionals of the scientific sector-disciplinary of belonging and afferent.

Learning skills (Dublin 5):

The student will be able to update and expand their knowledge by independently drawing on texts, scientific articles and online platforms.

5. PREREQUISITES

Basic education and knowledge of the biological sciences (Biology, Biochemistry, General Pathology) and morpho-functional (Anatomy, Physiology, Histology) are required.

It requires the student a basic knowledge of the principles of human anatomy and physiopathology and internal pathology cardiac, cerebral, respiratory and metabolic.

6. teaching methods

Teaching is delivered in the classroom through active and passive teaching methodologies:

- 1) lectures, with the use of audiovisual media;*
- 2) guided exercises, group discussion techniques and presentation of clinical cases, exposure of analysis results, verification and comparison of hypotheses.*

The teaching methods used can be as follows:

Knowledge and understanding (Dublin 1):

The teaching methods used allow the achievement of knowledge and understanding because they involve the exposure of real cases, with references to possible individual and contextual variables, through the use of texts and teaching materials in line with the literature and the main scientific evidence.

Applying knowledge and understanding (Dublin 2):

The teaching methods used allow the student to apply knowledge and understanding skills through presentation and discussion of clinical cases in line with common clinical practice. It is also planned to conduct practical tests in order to encourage the development of skills and skills.

Making judgements (Dublin 3):

The teaching methods used allow the student to obtain autonomy of judgment through the acquisition of theoretical knowledge and practical skills useful for the correct choice and use of diagnostic and evaluation tools available in order to correct diagnostic-therapeutic framing.

Communication skills (Dublin 4):

The development of students' communication skills is stimulated through direct involvement in the critical analysis of clinical cases exposed in the classroom by encouraging the use of appropriate scientific and technical terminology.

Learning skills (Dublin 5):

The teaching methods used allow the student to undertake subsequent studies with a high degree of autonomy because, thanks to the acquired knowledge and skills, he may carry out bibliographical research for the critical consultation of the scientific literature of interest.

7. other informations

- *Students will be asked periodically if they are required to deepen on specific topics, or if any of the topics covered in class did not have sufficient clarity.*
- *During the course the Professor can carry out formative assessments (ongoing tests). The purpose of the latter is exclusively to measure the effectiveness of teaching on learning processes and not to evaluate and measure with a vote the achievement of learning objectives.*
- *The Professors are available for individual interviews with the students, to be programmed directly or by sending an appointment request email to the Professor's institutional email outside class hours.*

8. methods for verifying learning and for evaluation

- *To pass the exam it is necessary to obtain at least the minimum score (18/30) at each individual Module.*
- *The final exam includes two different assessment methods: oral test for the Pharmacology and General Surgery Modules, written test by multiple choice test for the Emergency Medicine and Nursing Science Modules. The characteristics of the written tests and the modalities of the oral exam will be exposed in the classroom by the Professor, each for the subject of competence. The procedures of the individual tests may be subject to change at the discretion of the Professor. Any changes will be made known to the students in the appropriate manner and time.*
- *The proficiency exam is aimed at evaluating and quantifying with a grade the achievement of learning objectives. In the event that a slight deficiency in the written tests is found, the student may be given the opportunity (upon the unquestionable decision of the Professor responsible for the Module in which the full sufficiency has not been reached) to take an oral interview to verify that the minimum requirements have actually been met (18/30). For cases of proven disability, the provisions provided by current legislation are applied (e.g. granting of extended time in the formulation of the answers). With the passing of the exam the student acquires the CFU attributed to the educational activity in question.*
- *The assessment of profit determines a unique vote, as a global indicator of the knowledge and skills acquired by the student regarding the Teaching of Medical Sciences and First Aid (APU004). The vote is obtained following a contextual collective assessment established by calculating the weighted average of the votes obtained in each Module of the Teaching. Rounding of the final grade (excess/defect) follows the following scheme: decimal places 0 to 4 rounding down; decimal places 5 to 9 rounding down.*

The determination of the grade, expressed in thirtieth, takes into account the following elements: the logic followed by the student in solving the question; the correctness of the procedure identified for the solution of the question; the adequacy of the proposed solution in relation to the skills that the student is supposed to have acquired at the end of the course; the use of an appropriate

language.

The maximum score (30/30 and praise) for each Module is awarded if all the above elements are fully satisfied. In the case of written tests, the maximum score is assigned to the student who has provided the correct answer to all the questions in the test. With regard to the final grade related to the entire Teaching, the assignment of the maximum score (30/30 and praise) requires the achievement, for each Module, of a mark equal to at least 30/30.

- In particular, the methods of learning verification can be so declined:

Knowledge and understanding (Dublin 1): The methods of verification, in addition to evaluating the actual acquisition of basic knowledge related to the topics covered such as, "defining characteristics", "physiology" and "etiopathogenesis", have the objective of evaluating the skills of association and integration of the acquired notions, stimulating logical reasoning and critical thinking in order to develop a global vision of the treatment process.

Applying knowledge and understanding (Dublin 2): The methods of learning verification allow to verify/measure the knowledge and understanding acquired by the student through the application of diagnostic-therapeutic procedures and tools to specific clinical cases.

Making judgements (Dublin 3): The methods of verification allow to verify/measure the acquisition of the autonomy of judgment of the student because they are aimed at investigating the ability that he has to integrate theoretical knowledge with the understanding and interpretation of clinical data.

Communication skills (Dublin 4): During the oral interview, the language used by the student allows to evaluate the ability of exposure and logical integration of the learned content, as well as the appropriateness of the acquired technical/ scientific terminology.

Learning skills (Dublin 5): The methods of verification tend to investigate whether the student's learning of knowledge is sufficiently thorough and guided by a critical spirit. Specifically, questions are proposed to assess the level of ability and autonomy developed by the student in deepening and integrating the notions provided by the teacher, through the individual search for information and the ability to make reasoning beyond the textual material provided by the Professor.

9. program

Modulo 1: APU043 - Chirurgia generale (MED/18), 1 CFU: prof. Vincenzo Perri

- Wounds and dressings
- Burns
- Bruises and trauma
- Principles of asepsis

Modulo 2: APU042 - Farmacologia (BIO/14), 1 CFU: prof. Giovanna Petrucci

- Knowledge of the general concepts of pharmacology regarding the mechanism of action of drugs, their interactions with the receptor, their absorption, distribution and elimination. Knowledge of the main classes of drugs used, their indication to use, mechanism of action and main side effects.
- Definition of preclinical and clinical pharmacology, xenobiotic, drug. Pharmacokinetics:

absorption, distribution, metabolism or biotransformation and excretion of drugs; factors influencing absorption; bioavailability, volume of distribution, clearance, half-life.

- Pharmacodynamics: drug-receptor interactions, agonists and antagonists, efficacy, potency. Therapeutic index and margin of safety. Dose/concentration curves; effect/response curves.

Effective concentration 50. Effective dose 50, toxic dose 50, lethal dose 50. Interactions between xenobiotics. Side effects of drugs, pharmacovigilance.

- Special pharmacology: Anti-inflammatory and analgesic, antibiotics, disinfectants, antithrombotic drugs, drugs acting on the CNS, abuse substances.

Modulo 3: APU044 Medicina d'urgenza (MED/18), 2 CFU: prof. Gianluca Franceschini

- Role of the rescuer*
- Legal and medical background*
- The rescue chain*
- The activation of advanced rescue*
- Outline of anatomy and physiology*
- Internal pathologies (cardiac, cerebral, respiratory, metabolic)*
- Smoke inhalation*
- Basic cardiopulmonary resuscitation*

Modulo 4: APU045 Scienze infermieristiche generali e pediatriche (MED/45), 1CFU: prof. Massimo Fiorinelli

- Assessment of basic vital parameters and other parameters of clinical interest: heart rate (F.C.), blood pressure (P.A.), respiratory rate (F.C.), body temperature (T.C.), saturimetry (spo2), blood sugar.*
- Skin lesions from pressure: principles of etiopathology, classification, prevention and treatment of pressure injuries.*
- Nursing medical devices: central and peripheral vascular access.*
- Principles of collection of biological samples and diagnostic tests: venous blood sampling; capillary sampling; chemical-physical examination of urine and faeces (SOF); microbiological examination of urine and faeces.*
- Routes of administration of drug therapy: subcutaneous (s.c.), intramuscular (i.m.), intravenous (e.v.), transdermal (TTS), aerosol.*