



UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Promozione della Salute, Materno-Infantile, di Medicina Interna e Specialistica di Eccellenza "G. D'Alessandro"
ACADEMIC YEAR	2022/2023
BACHELOR'S DEGREE (BSC)	NURSING
SUBJECT	DIAGNOSTICS AND RADIOTHERAPY
TYPE OF EDUCATIONAL ACTIVITY	B
AMBIT	10312-Prevenzione servizi sanitari e radioprotezione
CODE	20326
SCIENTIFIC SECTOR(S)	MED/36
HEAD PROFESSOR(S)	MIDIRI MASSIMO Professore Ordinario Univ. di PALERMO
OTHER PROFESSOR(S)	
CREDITS	3
INDIVIDUAL STUDY (Hrs)	45
COURSE ACTIVITY (Hrs)	30
PROPAEDEUTICAL SUBJECTS	
MUTUALIZATION	
YEAR	2
TERM (SEMESTER)	1° semester
ATTENDANCE	Mandatory
EVALUATION	Out of 30
TEACHER OFFICE HOURS	MIDIRI MASSIMO Monday 09:00 11:00 I piano, Sezione di Scienze Radiologiche, BIND, Università degli Studi di Palermo

PREREQUISITES	The student must have knowledge in the field of anatomy, physiology and pathology in order to understand the content and the learning objectives of the course.
LEARNING OUTCOMES	1. KNOWLEDGE AND CAPACITY OF COMPREHENSION To learn the basics of the different diagnostic methods for images. To understand the biological effects of ionizing radiation. To know the possibilities and limits, indications, contraindications and risks of the various methods of investigation. To keep elementary knowledge on radiologic semeiology of the major pathologies with reference to different organs and apparatus. To have general notions on techniques and indications of interventional radiology, nuclear medicine and radiotherapy. 2. CAPACITY TO APPLY KNOWLEDGE AND COMPREHENSION To know how to recognize the main normal anatomical structures for a conventional x-ray examination, ultrasound, computer tomography and magnetic resonance imaging. To be able to find epidemiological and clinical information before making the choice of the diagnostic test to be used. To keep adequate knowledge and understanding of the main imaging techniques. To be able to require the most appropriate diagnostic test in the different clinical scenarios, according to criteria that provide basic principles of cost benefit, radiation protection, land availability and invasiveness of diagnostic methods. To know how to apply the major integrated diagnostic algorithms for assessing the most serious or common clinical situations. To be able to choose the best strategies and tools to get a proper diagnosis and to properly use the therapeutic options offered by interventional radiology, nuclear medicine, and radiation therapy. 3. AUTONOMY OF JUDGMENT To evaluate autonomously the professional issues related to the notions of the course; Ability to evaluate scientifically and autonomously the basic knowledge provided by the module; Ability to face general themes related to image diagnostics. 4. COMMUNICATION SKILLS Ability to communicate and disseminate the notions acquired during the module in professional field with scientific / clinical methodology. 5. LEARNING CAPACITIES The method used is to provide the student with the basic knowledge of the discipline with targeted insights useful for performing the functions of the profession of the medical doctor. The student will be able to independently learn any concepts, solutions and updates that may be required during his / her training and profession.
ASSESSMENT METHODS	Tests will take place through oral interview and / or written questionnaire. The oral test consists of a colloquium aimed at ensuring the possession of the skills and knowledge of disciplines provided by the course. The student will have to answer to at least two / three oral questions, on all parts of the program, with reference to the suggested texts. The evaluation is expressed in 30/30 with the following evaluation method: 30-30 and laude: Excellent knowledge of the subject matter, excellent language skills, good analytical ability, the student is able to apply the knowledge to solve the problems proposed. 26-29: Good knowledge of arguments, full language skills, the student is able to apply knowledge to solve the proposed problems. 24-25: Basic knowledge of the main topics, discrete language ownership, with limited ability to apply knowledge to the problem. 21-23: The student is not able to analyze the main subjects of the discipline but retains knowledge and satisfactory language property, poor ability to apply the acquired knowledge independently. 18-20: Minimum knowledge of the main topics of the course and technical language, little or no ability to apply the acquired knowledge independently. Insufficient: the student does not have an acceptable knowledge of the contents of the topics covered in the course. In case of a written test, the questionnaire will consists of 30 questions with multiple possible answers, only one of which will be correct. Each correct answer will get 1 point, while an incorrect answer will be counted -0.25. Answers not given will not cause any penalties. Whatever the modality of evaluation, the test will be aimed at ensuring the expected learning outcomes. The exam duration is 30 minutes.
EDUCATIONAL OBJECTIVES	Ability to use the theoretical knowledge in a practical context. To learn about the management of the workflow in radiology department. To display the way 'of execution of traditional radiology exams, ultrasound, CT, MRI. To view the reporting of traditional radiology exams, ultrasound, CT, MRI. To identify the key radiographic findings in the light of the report. To display image processing techniques in CT and MR.
TEACHING METHODS	Lectures at the Department of Radiology - A.O.U.P. Paolo Giaccone.
SUGGESTED BIBLIOGRAPHY	

	Didactic material and texts provided by the teacher. Learning Radiology Recognizing the Basic William Herring Saunders Editor 2015
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SYLLABUS

Hrs	Frontal teaching
2	PHYSICS OF RADIATION - TECHNIQUES AND METHODOLOGY - CONTRAST MEDIA
3	Contrast media: classification and characteristics; clinical applications; adverse reactions and related measures.
1	Tomografia Computed: principles.
1	Ultrasound: the physics of ultrasound and general notions on the equipment.
1	Magnetic resonance imaging: physical principles and general notions on the equipment.
1	Nuclear Medicine: physical principles and general notions on the equipment.
1	Vascular and Interventional Radiology: generality and major procedures.
2	Radiobiology and Radiotherapy
2	IMAGING TECHNIQUES OF RESPIRATORY SYSTEM
2	IMAGING TECHNIQUES OF DIGESTIVE SYSTEM
2	IMAGING TECHNIQUES OF LIVER - BILIARY tract - pancreas - spleen
2	IMAGING TECHNIQUES OF Urinary system, genital system and adrenal glands
2	IMAGING TECHNIQUES OF THYROID - BREAST - SOFT PARTS
2	IMAGING TECHNIQUES OF OSTEOARTICULAR SYSTEM
2	IMAGING TECHNIQUES OF CARDIOVASCULAR, LYMPHATIC, AND HEMATOPOIETIC SYSTEMS
2	IMAGING TECHNIQUES OF NERVOUS SYSTEM
2	DEFINITION OF DIAGNOSTIC ALGORITHMS IN MORE COMMON DISEASES