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Specific Learning Outcomes is familiar with the fundamentals of physics, mathematics and statistics	Appli	Histo Hum	Expe	Math	loan loan	Biock	Hum		Mech	snpul	Micr	Gene Lab 1	Histo	Bioc	Hum	Elect	Elect	Appli Gene	Clinic	Inter	Intel	Cardi
is familiar with the fundamentals of chemistry, with the relative chemical reactions as well as the properties of living matter's elements  understands the functions of the main cell organelles, as well as synthesis and structure of nucleic acid and of proteins  is familiar with the action mechanism of enzymes, the main metabolic paths and the melecular signaling mechanisms																						
is familiar with the action mechanism of enzymes, the main metabolic paths and the molecular signaling mechanisms  is familiar with the morpho-functional organization of tissues and the main cellular mechanisms that regulate functioning under physiological conditions through optical and electron microscope  understands the genetic-molecular charachteristics of the single individual and how they influence the susceptibility to diseases and response to therapies																						
is familiar with human embryo development and the embryonic origin of the various tissues/organs  understands the morpho-functional organization of the human body into organs and apparatuses under physiological conditions																						
understands the morpho-functional organization of the human body into organs and apparatuses under pathological conditions is familiar with the physiology of the various organs, how they functionally and dynamically cooperate with each other is familiar with the mechanisms of action of pathogens, their interactions with the best and the fundamentals of histochnologies applied to bacteriology, virology, mycology, and parasitology.																						
is familiar with the mechanisms of action of pathogens, their interactions with the host and the fundamentals of biotechnologies applied to bacteriology, virology, mycology and parasitology is familiar with the main bioethical problems relative to pre-clinical and clinical trial of drugs																						
is familiar with the mechanism of action of the immune system as well as its molecular and cellular basis is familiar with the etiologic fundamentals and with pathogenic mechanisms of the main human diseases is familiar with the correct method of putting together an anamnesis with the aim of carrying out a physical examination																						
is familiar with the correct method of putting together an anamnesis with the aim of carrying out a physical examination is familiar with physical symptomatology and lab activities to reach a correct diagnosis is familiar with the main methodologies of biochemical clinic and molecular biology, clinical pathology and chemical microbiology and their implementations																++						
understands the characteristics of biocompatible or biomimetic materials to be used in devices in contact with tissues or implanted and in prosthesis is familiar with the functioning principles of the new diagnostic methods, along with the comprehension of the fundamental functioning of the main tools and technologies employed in the diagnostic and therapeutic practice																						
understands in an autonomous fashion data and signals obtained by the use of biomedical tools/diagnostic methods understands the technological and methodological notions of computer science, with the purpose of using communication and information technologies in an appropriate fashion																						
is familiar with the fundamentals of artificial intelligence, the meaning and implementation of machine-learning protocols and big-data approach techniques is able to use the acquired physics, mathematics and chemistry knowledge to understand biomedical phenomena and the functioning of new diagnostic methods is able to associate the structure and function of cell organelles, of nucleic acids and of proteins																						
is able to employ and recognize the main histology and immunohistochemistry techniques with the purpose of analyzing cellular and sub-cellular structures through optic and electron microscope																						
is able to identify and classify the different human tissues under physiological conditions, through optic and electron microscope is able to associate the morpho-functional and the topographic organization of organs, apparatuses and tissues is able to effectively utilize the acquired micro-biological and virological knowledge for the evaluation of the main pertinent diagnostical-clinical aspects																						
is able to employ the acquired knowledge in the computer science, electronic and electro-technical fields to choose the most innovative technologies and for the autonomous evaluation of the results obtained from them employs the comprehension of big-data and artificial intelligence to the medical context																						
is able to utilize bio-technological tools in order to carry out diagnoses and to put forward innovative therapeutical protocols employs the acquired knowledge to reach a differential diagnosis, using hypothetical deductive and analytical-inductive thinking and the physiopathological reconstruction of the case																						
is able to associate the molecular, morphological, micro-biological, immunological and physiological knowledge with the etiopathogenesis of the pathological processes and the fundamental physiopathological mechanisms of the organism is able to properly ask for a lab analysis, knowing its principles and the subsequent elaboration of the result																						
is able to interpret experimental and clinical data using general physiopathology and pathology knowledge is able to choose and employ the different organic and inorganic materials in contact with the patient																						
the expected learning outcomes (correlated to the Dublin Descriptors 1 and 2) relative to this area are obtained through the attendance of the planned teaching activities (integrated courses traineeship activities, small-groups teaching, practice) and through autonomous study; they will also be evaluated during certifying examination tests, during mid-term examinations and in the evaluation of internship activities.  is familiar with the anatomopathological pictures at a macroscopic, microscopic and ultrastructural level in relation with the main diseases of the different apparatuses, as well as the	,																					
pathological anatomy linked to the molecular genetics and biology  is familiar with the physical/technical fundamentals of the main diagnostic and interventionist methods, the preparation of patients for the exam and the methods of carrying it out, employing the principles on evidence-based medicine																						
is familiar with the radioprotection notions indispensable for the evaluation of the risk-benefit ratio in the setting of the different diagnostic exams is familiar with the molecular and cellular mechanisms of the diseases at the expense of the various organs and apparatuses also in relation with the characteristics that influence the																						
vulnerability and response of every single patient so as to be able to identify the prevention activities, diagnostic tracks and more personalized therapies is familiar with the drugs' principles of action, their uses and the efficiency of the different pharmacologic therapies, paying attention to sex/gender and ethnicity differences																						
is familiar with the methods of the clinical pharmacology, including the drug vigilance and drug epidemiology, the classification and the properties of the different products on the market as safeguard of health and well-being, the regulatory process of the drugs and the essential elements of their clinical experimentation is familiar with and is able to employ the main biochemical, pharmacological, surgical, psychological, social operations both in severe and chronic diseases, in rehabilitation and in terminal																						
therapies also through the use of computer science, electronic, robotic, tissue-engineering, computational biology and artificial intelligence technologies recognizes every condition that may put in imminent danger the life of the patient, properly and autonomously manages the main medical urgencies																						
manages the patients in an effective, efficient and ethical manner, promoting health is familiar with the main factors determining health and disease, such as lifestyle, genetic, demographic, environmental, professional, socio-economical, psychological and cultural factors in the population as a whole and of the ethnic or gender-specific differences																						
understands the necessity of a collective responsibility in health promotion actions that require a tight cooperation with the population, and a multidisciplinary approach which includes health professionals as well as an multi-sectoral collaboration with a particular focus on the bioengineering one is familiar with the fundamentals of the sciences, in line with the professional figure, necessary to take decisions relative to the organization and management of the health services supplied by medical staff inside health structures of low, medium or high complexity																						
evaluates the rehabilitation of patients (also through innovative bio-compatible devices) based on the knowledge of the biomechanics of the human body possesses the main notions of medical robotics and of network medicine																						
displays a good understanding of the medical and juridical aspects of the medical profession, along with the regulatory and ethical prerequisites has knowledge of the correct ways of employing the data of local, regional and national surveillance, of demography and of epidemiology in taking decisions regarding health is familiar with notions of tissue engineering and its use in restorative medicine																						
is able to critically evaluate and relate the different clinical symptoms, the physical signs, the relevant alterations of function of the human body with the anatomopathological picture, as well as with the cellular, tissue-related, and organ-related injuries, interpreting its production mechanisms and understanding the clinical meaning of the diseases at the expense of the different apparatuses, also in relation with sex/gender differences																						
is able to identify integrated diagnostic procedures and point at the best therapies, also of precautionary and of rehabilitation types correctly manages every condition that puts in imminent danger the life of the patient																						
is able to employ the diagnostic methods to carry out a diagnosis and to choose the therapeutic, surgical and operational strategies is able to prescribe an adequate therapy to cure the main diseases of the medical area and is able to pinpoint the correct indications for the surgical therapy, also according to the principles of precision medicine and in relation to the sex/gender differences																						
is able to employ the methods of clinical pharmacology, including drug surveillance and drug epidemiology, as well as the regulatory procedures for drugs and the essential elements of their clinical experimentation  is able to cure diseases and to take care of patients in an effective, efficient and ethical fashion, with the purpose of promoting health and prevention, standing by the moral duty of												<u> </u>										
guaranteeing an effective medical care during terminal stages of life, including both palliative therapies for symptoms, pain, and the person's existential suffering. Is aware of the limits of therapies, both in incurable chronic degenerative illnesses and in the diseases of the elderly, in order to preemptively activate palliative cures, before the terminal phase of the disease.																						
Properly employs the biomedical tools  Understands tissue-engineering fundamentals and employs them in restorative medicine																						
Employs the knowledge of translational medicine, from bio-computerscience to the clinical context  Employs the knowledge in the human body biomechanics for the rehabilitation of the patients, also through the use of innovative biocompatible materials																						
Contributes in implementing and perfecting the employment of medical robotics and of network medicine is able to integrate the multidisciplinary knowledge acquired																						
manages the complexity of clinical situations awaiting in the exercise of the profession expresses a judgement despite limited or incomplete information					1																	
analyzing and solving problems analytically																						
acquire independent critical thinking to apply through insight and social and ethical responsibility  to independently choose the technologies, hardware and software tools useful for the patient's care while respecting the human and social context in which one has to operate for a constantly evolving and targeted managing of the health technology																						
to listen carefully in order to understand and summarize the relevant information on every issue, understanding their contents  puts into practice the communication skills to facilitate the understanding with patients and their kins, enabling them to take decisions as equals																						
effectively communicate with colleagues, with the Faculty, with the community, with other sectors with particular regard to project-engineers of health technologies, in order to address potential improvements																						
interacting with other professional figures engaged in the patient's care through effective teamwork displays fundamental ability and proper attitude towards teaching others																						
communicates in an effective manner both orally and by writing also in critical situations such as serious diagnosis, and sensible topics relative to the sexual and reproductive life, about end-of-life decisions is able to create and maintain good medical documentation																						
properly gather, organize and interpret the health and biomedical information from the different sources and databases available					-																	
is able to gather specific information on the patient from the managing systems of clinical data is able to employ the technology associated with the information and communications as proper support to diagnostical, therapeutical and precautionary practices and for the surveillance and monitoring of the health level												_										
understands the employment and the limitations of technology for health in the clinical context  is able to manage a good self-archive of the medical practice, for future analysis and improvement																						
and to manage a good sen dremve of the medical practice, for future analysis and improvement	1			1	[								<u> </u>									

	Organ System Diseases 2: Kidney and Genitourinary Syste  Mathematical Models in Medicine  Publich health  Pharmacology  Data Science for Bioengineering  Organ System Diseases 3: Endocrine and Gastrointestinal				Organ System Diseases 3: Endocrine and Ga						Oncology, Genetics and Internal Medicine			— Clinical Neurosciences and Mental Health			New Radiology Diagnostic and Therapeutic Modality		/ year	Head and Neck Diseases			Dermatology, Plastic surgery and Infectious Diseases			Rone and Loint and Technologies in Rebabilitation	bone and Joint and Technologies in Renabilitation			Patient Management			Dediatrice Octatrice and Gynacology			Healthcare Robotics and Active Ageing				Emergency and Life Support and Legal Medicine and Bioe					
Pathological Anatomy	Nephrology	Urology	Pathological Anatomy	Electronic and Computer Bioengineering	Hygiene, Public Health and Community Medicine	Pharmacological Basis of Therapeutics II	Information Processing Systems	Gastroenterology	Endocrinology	al Surgery	rnal Medicine	Pathological Anatomy Pathological Anatomy PTA- IV	Oncology	Genetic Medicine	Internal medicine (Immune system)	Neurology	0	Neurosurgery	erventional Radiology	Nuclear Medicine, Radiotherapy, Radiobiology, Radio protection	Electronic and Computer Bioengineering	Oral Diseases	Ophtalmology	ORL	Infectious Diseases	Cutaneous and Venereal Diseases	Plastic Surgery	Muscoloskeletal System Diseasesn	Physical and Rehabilitation Medicine	Rheumatology	PTA- V	inical Me	= 1	⊂	Clinical pathology	ediatr	diatric Surgery	Gynaecology and Obstetrics	Geriatrics	inical Geriatri	esthesiology	Medical Emergencies	Surgical Emergencies	Forensic Medicine	Occupational Medicine

