Teaching Regulations of the Master's Degree Course in Medicine and Surgery

A.A. 2023/2024

Sommario

Art. 1 - General directions of the Course of Study

The Course of Study in Medicine and Surgery belongs to the LM-41 degree class and is activated pursuant to the Decree of the Minister of University and Research March 16, 2007, as amended.
The Course pertains to the Interdisciplinary Department of Medicine within the School of Medicine.
The teaching site is located at
 the A.O.U. Policlinico Consorziale Bari.
These Regulations are drawn up in accordance with the educational regulations of the Course of Study in Medicine adopted in the academic year 2023-2024.
The management bodies of the Course of Study are the Coordinator, the Course of Study Council and the Course of Study Council.
The educational activities of the Course of Study are delivered in the Italian language.
The Degree Course prepares a WEB site, within the University of Bari Aldo Moro website, containing all useful information for students and teaching staff and takes care of the maximum dissemination of its address. Corso di Laurea Magistrale a ciclo unico in Medicina e Chirurgia — Medicina e chirurgia (uniba.it); link Taranto: Corso di Laurea Magistrale a ciclo unico in Medicina e Chirurgia — Medicina e chirurgia (uniba.it))

Art.2 - Specific educational objectives, expected learning outcomes and job outlets

2.1Training Objectives.
For the purpose of achieving the aforementioned educational objectives, the single-cycle bachelor's degree program provides a total of 360 CFUs, spread over six years of the course, of which at least 60 are in Basic Sectors.
The course is organized into 12 semesters and 35 integrated courses; these are assigned specific CFUs by the Council of the teaching structure in compliance with the provisions of the table of indispensable educational activities. Each CFU corresponds to a student-commitment of 25 hours, of which not more than 10 hours are usually in frontal lectures, or 20 hours of assisted study within the teaching structure. Each professionalizing CFU corresponds to 25 hours of student work, including 20 hours of professionalizing activity with teacher guidance on small groups within the teaching structure and the territory and 5 hours of individual reworking of the learned activities.
The Board of the teaching structure determines in the 'Manifesto of Studies' and reports in the 'Student Guide' the articulation of integrated courses into semesters, the related CFUs, the 'core curriculum' and learning objectives (including those related to the CFUs of the professionalizing-type activity) specific to each integrated course, and the type of profit verifications. The profit verifications, in a number not exceeding 36, are scheduled by the competent Council of the teaching structure during the periods when frontal teaching activities are interrupted. The profit verification, successfully passed, entitles the student to the acquisition of the corresponding CFUs.
The mission of the single-cycle Master's Degree Course is identified with the training of a physician at the initial professional level with a biomedical-psycho-social culture, possessing a multidisciplinary and integrated view of the most common problems of health and disease, with an education oriented to the community, the territory and fundamentally to the prevention of disease and health promotion, and with a humanistic culture in its implications of medical interest; such a specific mission responds more adequately to the new needs of care and health, in that it is centered

not only on the disease, but above all on the sick man, considered in his totality of soma and psyche and inserted in the social context.
Medical training thus oriented is also seen as the first segment of an education that must last over time, and in this perspective the knowledge that the student must acquire at this stage has been calibrated, giving due importance to self-study, to experiences not only in the Hospital but also in the territory, and to epidemiology, for the development of clinical reasoning and the culture of prevention.
The qualifying characteristics of the physician to be trained include:
1) Good human contact skills (communication skills);
2) Ability to self-learning and self-evaluation (continuing education);
3) Ability to independently analyze and solve problems related to medical practice along with good evidence-based clinical practice (evidence-based medicine);
4) Habit of constant updating of knowledge and skills, and possession of the methodological and cultural basis for autonomous acquisition and critical evaluation of new knowledge and skills (continuing professional development);
5) Good practice in interdisciplinary and interprofessional work (interprofessional education);
6) Thorough knowledge of the methodological foundations necessary for a correct approach to scientific research in the medical field, together with the autonomous use of information technology indispensable in clinical practice.
The key words of the didactic method adopted, useful for the achievement of the expected qualifying characteristics, involve the horizontal and vertical integration of knowledge, a teaching method based on a solid cultural and methodological foundation achieved in the study of pre-clinical disciplines and later predominantly centered on the ability to deal with problems (problem oriented learning), early contact with the patient, a good acquisition of clinical skill along with a good acquisition of the ability to human contact.
A highly integrated, flexible and modifiable teaching organization, a true laboratory of scientific experimentation, has therefore been planned, with the intention of promoting in students the ability to acquire knowledge not in a fragmentary but in an integrated way, and to keep it alive not only in the short term but also in the longer term. The student is therefore considered the pivot of the educational process, both in instructional design and in the improvement of the entire curriculum, with the aim of enhancing his or her autonomy of initiative.
A solid foundation of clinical knowledge is also ensured for the student through the organization of certified internships based on tutorial teaching, together with a strong understanding of the medical-scientific method and the humanities. True professional competence is achieved, in our opinion, only after a long habit of patient contact, which is promoted from the first year of the course and integrated with basic and clinical sciences throughout their training through extensive use of tutorial activities.
In the teaching design of our master's degree program, the right balance of integration is proposed between: 1) basic sciences, which must be broad and include knowledge of evolutionary biology and biological complexity aimed at understanding the structure and function of the human organism under normal conditions, for the purpose of maintaining health conditions, 2) clinical and methodological medical practice, which must be particularly solid, through extensive use of tutorial teaching capable of transforming theoretical knowledge into personal experience and building one's own scale of values and interests, 3) human sciences, which must constitute a useful baggage to achieve awareness of being a doctor.

The special features of the Bachelor of Medicine degree program aimed at achieving the general, intermediate, and specific objectives are summarized as follows:

1) Within the framework of the provisions of current legislation, the planning of objectives, programs, and teaching is multidisciplinary.

2) The teaching method implemented is interactive and multidisciplinary, with daily integration of basic sciences and clinical disciplines and early clinical involvement of students, who are immediately oriented to a proper approach to the patient. Problems in the basic sciences and those in the clinical field are thus addressed in all years of the course (total integration model), albeit in different proportions, but with a unified and highly integrated vision, including through the use of multi-voice didactics and problem-based learning and problem-solving with appropriate decision-making.

3) Choice of specific objectives of core courses made as a priority on the relevance of each objective within the framework of human biology, and propaedeuticity to current or foreseeable clinical issues, with particular attention to the component concerning scientific methodology.

) Choice of specific objectives of the characterizing courses made primarily on the basis of epidemiological prevalence, urgency of intervention, possibility of intervention, severity and didactic exemplarity. Also planned is the enhancement of attendance in hospital wards and outpatient clinics of territorial facilities and the enhancement of the relationship with the patient, including the psychological aspect.

5) The teaching process makes use of, and enhances the use of, modern teaching tools, consisting of the tutorial system, clinical trigger, problem-oriented learning, experiencial learning, problem solving, decision making, and extensive use of seminars and lectures.

6) Tutorial lecturers who collaborate in the student's learning process with functions of facilitating learning (area tutors) and supporting (personal tutors) students are predominantly used.

7) Special attention is paid regarding the acquisition of practical skills, through: 1) involvement in basic research planning in the first three years of the course, 2) learning the semeiological basis of clinical sciences at the bedside of the patient and in laboratories in the intermediate period (internship organized as a tutored guided activity in the 3rd year of the course), 3) attendance of university wards and outpatient clinics (clinical clerkship - from the 4th to the 6th year of the course) and territorial such as those of General Practitioners (from the 4th to the 6th year of the course), for the completion of clinical internship in the last years of the course and the internship period for the purpose of thesis preparation, 4) participation in research programs in the internship period for the purpose of thesis preparation.

8) Special attention is given to the learning of the English Language;

9) Particular attention is given to computer and multimedia methodologies including through e-learning, telededidactics and telemedicine experiences, and the proper use of bibliographic sources.

10) Enhancement of Clinical Methodology - Human Sciences (Methodologies) through integrated courses that accompany the student throughout the entire course of training (I-VI year). Everyone is familiar with the importance of method in medicine, both in terms of knowledge of medical methodology and its rules according to the principles of evidence-based medicine and clinical methodology applied to the individual patient. This integrated course immediately orients students toward a humanistic education, which will accompany them in the scientific-professional training process. This training will enable them to hone skills and acquire the correct and innovative means of clinical reasoning. This will be done through the applications of 'evidence-based medicine', 'evidence-based teaching' through the use of 'guidelines', 'concept maps' and 'algorithms'. Issues

pertaining to interdisciplinarity and interprofessionalism, health economics, physician professionalism, physician social responsibility, social and gender perspectives, relationships with so-called complementary and alternative medicine, prevention, chronic patient education, addiction pathologies, palliative care for the terminally ill, gender medicine and narrative medicine are also to be addressed as part of this integrated course. The gradual acquisition of the method is coupled with the students' humanistic education. They can thus grow scientifically and likewise develop greater sensitivity to ethical and socio-economic issues, enabling them to interact with the patient in his or her entirety as a sick person, according to the concept of whole person medicine. This responds to the growing need for a rapprochement between the figure of the physician and that of the sick man, who are increasingly estranged from a uniquely technological medical practice. Within this framework, an attempt has also been made to use so-called narrative medicine, together with reflection grids, and the role-playing technique as important tools in the student's acquisition of true emotional and professional competence (used by Psychologists and Psychiatrists in the Methodology course and the Psychiatry course).

11) Students are also assessed through formative in itinere verifications (self-assessment tests and intermediate interviews), students' written reports on assigned topics, and through the evaluation of the overall profile drawn up according to predefined criteria. The examination tests can be articulated-as well as in the traditional modes of oral or written examination-also in a sequence of useful items to test acquired knowledge (knows and knows how) such as multiple-choice tests or written short answers organized on interdisciplinary problems or clinical cases, followed by examinations useful to ascertain acquired clinical skills, such as the Objective Structured Clinical Examination (shows how) or such as the mini-Clinical Evaluation Exercise, the Direct Observation of Procedural Skills and the use of the Portfolio (does). As a general rule that applies to all integrated courses, formal assessments will be based on written tests or oral tests. The Maastricht-type Progress Test is used in the evaluation of students to assess the actual competence achieved. Having completed the experimental phase, the Progress Test will be used systematically not only as a measure of student proficiency, but as an efficient tool for feedback, continuous self-assessment and comparison of student preparation on a national scale.

2.1 Expected learning outcomes, expressed through the European qualification descriptors

2.2 Knowledge and comprehension skills

Medical graduates must be able to know the basic principles of medical bioethics in the practice of medicine, know the basics of the physiology of the functioning of the body, understand the mechanisms underlying diseases, and study the basics of pharmacology and treatment. In addition, knowledge should be enriched by the indication of the determinants and major risk factors of health and disease and the interaction between humans and their physical and social environment.

Ability to apply knowledge and understanding

Graduates must be able to apply their knowledge and understanding of social-health problems. Clinical skills must be comprehensive from the excellent formulation of the history to the performance of the general and apparatus objective examination and the formulation of a diagnostic suspicion. The ability is enriched by the choice of the best diagnostic procedure and

knowledge of clinical-instrumental modalities to arrive at the final diagnosis and treatment with the primary goal being the care and health of the population.

Autonomy of judgment

Graduates must have the ability to integrate knowledge and manage complexity, as well as to make judgments on the basis of limited or incomplete information, including reflection on the social and ethical responsibilities related to the application of their knowledge and judgments.

Therefore they must be able to:

Critical Thinking and Scientific Research

1) Demonstrate in the performance of professional activities a critical approach, constructive skepticism, and a creative research-oriented attitude;
2) Take into account the importance and limitations of scientific thinking based on information, obtained from various resources, to establish the cause, treatment, and prevention of diseases.
3) Make personal judgments to solve analytical and complex problems ('problem solving') and independently search for scientific information, without waiting for it to be provided to them.
4) Identify, formulate and solve patient problems using the basis of scientific thinking and research and on the basis of information obtained and correlated from various sources.
5) Be aware of the role that complexity, uncertainty, and probability play in decisions made during medical practice.
6) Formulate hypotheses, collect and critically evaluate data, to solve problems.

Professional Values, Skills, Behavior and Ethics.

1) Identify the essential elements of the medical profession, including the moral and ethical principles and legal responsibilities that underlie the profession.
2) Respect professional values that include excellence, altruism, responsibility, compassion, empathy, trustworthiness, honesty and integrity, and a commitment to following scientific methods.
3) Be aware that every physician has an obligation to promote, protect, and improve these elements for the benefit of patients, the profession, and society.
4) Recognize that good medical practice depends closely on interaction and good relationships between physician, patient, and family to safeguard the well-being, cultural diversity, and autonomy of the patient.
5) Demonstrate the ability to correctly apply the principles of moral reasoning and make the right decisions regarding possible conflicts in ethical, legal, and professional values, including those that may arise from economic hardship, commercialization of health care, and new scientific discoveries.
6) Respond with personal commitment to the need for continuous professional improvement in awareness of one's limitations, including those of one's medical knowledge.
7) Respect colleagues and other health professionals, demonstrating the ability to establish collaborative relationships with them.
8) Comply with the moral obligation to provide medical care in the terminal stages of life, including palliative treatment of symptoms and pain.
9) Implement ethical and deontological principles in the handling of patient data, avoidance of plagiarism, confidentiality and respect for intellectual property.

10) Effectively plan and manage one's time and activities to cope with uncertain conditions, and exercise the ability to adapt to change.
11) Exercise personal responsibility in caring for individual patients.
Communication skills
Graduates must be able to communicate clearly and unambiguously their conclusions, knowledge and the rationale behind them to specialist and nonspecialist interlocutors, as well as - in the manner required by the circumstances - to their patients.
Therefore they must be able to:
Communication Skills
1) Listen carefully to extract and synthesize relevant information on all issues, understanding their content.
2) Practice communication skills to facilitate understanding with patients and their relatives, making them able to share decisions as equal partners.
3) Communicate effectively with colleagues, faculty, the community, other fields, and the media.
4) Interact with other professionals involved in patient care through effective teamwork.
5) Demonstrate basic skills and correct attitudes in teaching others.
6) Demonstrate good sensitivity to cultural and personal factors that enhance interactions with patients and the community.
7) Communicate effectively both orally and in written form.
8) Create and maintain good medical records.
9) Summarize and present information appropriate to the needs of the audience, and discuss achievable and acceptable action plans that represent priorities for the individual and the community.

Learning skills
Graduates must have developed those learning skills that enable them to continue their studies mostly self-directed or autonomously.
They must therefore be able to:

Information Management
1) Collect, organize and correctly interpret health and biomedical information from the various resources and databases available.
2) Gather patient-specific information from clinical data management systems.
3) Use technology associated with information and communications as valuable support for diagnostic, therapeutic, and preventive practices and for surveillance and monitoring of health status.
4) Understand the application and also the limitations of information technology.
5) Manage a good record of one's medical practice for later analysis and improvement.

2.3 Employment outlets
Medical graduates have employment outlets within the profession of General Practitioner, Territorial Physician, Outpatient Specialist or Hospital Physician.
The course prepares for the profession of General Practitioner.

Art. 3 - Admission requirements and methods of verification of initial preparation

3.1. Method of admission

The specific procedures for admission to the single-cycle Bachelor of Science in Medicine degree program are governed by Ministerial Laws and Regulations at the national level. The pre-requisites required of a student who wants to enroll in a medical degree program should include: good human contact skills, good teamwork skills, ability to analyze and solve problems, and ability to independently acquire new knowledge and information by being able to critically evaluate it (Maastricht, 1999). In addition to the scientific knowledge useful for attendance in the first year of the course, he or she should therefore also possess good attitudes and sound motivational components, which are important for the formation of a "good doctor" who can properly relate to the social responsibilities required by institutions. To be admitted to the Master's Degree Program in Medicine and Surgery, it is necessary to possess a high school diploma or other qualification obtained abroad that is recognized as suitable. It is also required to possess or acquire an adequate initial preparation in accordance with the provisions of current regulations regarding access to courses with a programmed number at the national level and the availability of Teaching Staff, teaching facilities (classrooms, laboratories) and care facilities that can be used for the conduct of practical activities in the department, consistent with the recommendations of the Advisory Committee on Medical Training of the European Union, applying the parameters and guidelines prepared by the University and the School.

The programmed number of accesses to the first year of the course is defined in accordance with the current regulations on access to university courses.

3.2. Additional training requirements

Admission to the Bachelor of Medicine degree program requires that Students enrolled in the 1st year of the program possess an adequate initial preparation, achieved in their previous studies. As part of the educational organization, Students who, following the conduct of the admission test, are admitted with a grade lower than a predetermined minimum grade - to be established annually - are assigned Additional Formative Obligations (OFAs).
In order to allow for the remediation of OFAs, the Medical Degree Council will provide for remediation during the teaching activities of the 1st year of the course. Supplementary didactic courses will be offered before the beginning of the teaching activities of each new academic year, aimed at the recovery of the deficiencies highlighted during the completion of the admission tests. These courses will cover the disciplines of Biology, Physics and Chemistry. Verification of the results achieved in the preparatory educational activities will occur as part of the evaluation of the corresponding courses. Students who have not fulfilled the OFAs within the first year of the course will not be allowed to take the exams scheduled for the second year

Art. 4 - Description of the training course and assessment methods

The educational activities included in the curriculum are shown in Tables 4.1. and 4.2

4.1. Training course

The course of education is described in Tables 4.1 and 4.2.

Part-time enrollment is not available for the Course of Study in Medicine and Surgery.

Tabella 4.1. Obiettivi formativi degli insegnamenti per il corso di studio in Medicina e Chirurgia, per la coorte 2023/24, attività obbligatorie

Attività formativa	Unità Didattica	Obiettivi formativi
Chemistry and Propaedeutic Biochemistry	Chemistry and Propaedeutic Biochemistry	Objective 1 Knowledge of the structure and transformations of matter and molecular phenomena that have a direct or indirect bearing on clinical-medical applications, with special emphasis on acid-base equilibria, physiological buffers, gas laws and solubility, osmotic phenomena, properties of solutions, and electrochemical potential. Objective 2 Knowledge of the functional groups of major organic molecules and their reactivity from the perspective of metabolic mechanisms and understanding the function of macromolecules in the human body. Objective 3 Knowledge of the main classes of macromolecules (carbohydrates, lipids, proteins, nucleic acids, vitamins, and coenzymes) in the human body, with particular attention to their structure-function relationship and their possible involvement in pathophysiological processes. Objective 4 Knowledge of the general characteristics of catalysts, with special attention to the role played by enzymes in regulating reactions of metabolic pathways.
Medical physics, Medical Statistics	Medical Physics	The objective of the course is to provide the student with a basic knowledge of general physics and to illustrate its applications in the biological and medical fields. Upon completion of the course, the student will be able to understand the concepts and physical quantities useful in describing pathophysiological events in the human organism. In addition, the student will acquire the skills to apply the scientific method in the description and interpretation of simple natural phenomena.
	Medical statistics	The training activity aims to provide the elements: - of descriptive statistics, with the aim of summarizing the results of data from sample surveys or other source (systematic and/or continuous) - of inferential statistics, in order to translate research hypotheses into statistical hypotheses and to identify and apply the appropriate statistical methods of analysis - for critical reading of scientific literature and interpretation of results of clinical studies - for the use of statistical analysis software available online or with common commercial packages (Excel, Google sheets, etc...)
Applied and Molecular Biology	General Biology	The educational activity, consistent with the declaratory of SSD BIO/13, aims to provide an understanding of: - the constructive logic of biological structures at the different levels of organization of living things; - the mechanisms in charge of the functioning and reproduction of the cell; - the structure and function of nucleic acids and the flow of information in cells; - the structure-function relationship and molecular recognition as the bases of the action of informational molecules and the expression of genetic information in cells; - the principles underlying the diversification of biological units; - the dynamic character of living matter, as a result of the interactions between biological units and the environment; - biotechnological applications related to the knowledge of the above processes

	General genetics	The educational activity , consistent with the declaratory of SSD BIO/13, aims to provide an understanding of: -The organization of genetic material in the cell and the processes of division -The fundamental mechanisms governing the transmission of hereditary traits -The balance between continuity and variability of genetic information in living organisms; -The modes of transmission of hereditary traits and the mechanisms that can give rise to normal and pathological phenotypic variants; -Applications of general and molecular genetics related to the knowledge of the above processes
Computer, linguistics and Professional Skills	English	The aim of the course is to enable students to expand their knowledge of the English language in all its aspects, from listening to the writing of scientific abstracts. The course aims to deepen grammatical knowledge, expand vocabulary and provide students with the tools to be able to carry out specialist medical translation and to be able to accurately present scientific topics at medical conferences..
	Informatics	Knowledge and understanding: Acquisition of the theoretical and experimental bases of classical computer science; Ability to apply knowledge and understanding: ability to identify the main components of a PC, manage networks, and use some applications (Office) Making judgements: Ability to install and use word processing, video presentation, calculation processing applications. Communication skills: Ability to express oneself in a scientifically rigorous way and to communicate one's knowledge during exams. Learning skills: Learning of basic notions and consolidation of logical and scientific aptitudes useful for subsequent studies.
	Health and Occupational Safety	The training objective of the course is the acquisition of the main knowledge concerning the regulatory framework on health and safety in the workplace, occupational risks, the foundations of health surveillance pursuant to Legislative Decree 81/08, of the judgment of suitability for the specific job, the prevention of accidents at work and occupational diseases.
	Nursing sciences	At the end of the course, the student should be able to know the professional profile of the nurse and the specific and multidisciplinary approach to nursing and care in and out of the hospital, as well as the main elements of the nursing process, identifying the main elements of diagnostic reasoning applied to a clinical case. In addition, the student will be able to recognize and enunciate the characteristic elements of some of the main basic nursing techniques and to decline this content within clinical care pathways and PDTAs.
Applied and Molecular Biology	Molecular biology	The course aims to provide fundamental knowledge of the molecular mechanisms that regulate and underlie the maintenance and flow of genetic information in prokaryotic and eukaryotic organisms (including humans). It is proposed to provide information on the structural levels of nucleic acids and the molecular mechanisms of DNA replication and transcription, protein synthesis, and regulation of gene expression. Special attention is also given to the study of the mitochondrial genome and its alterations. In addition, information is provided on the main techniques of molecular biology in the context of the emerging potential provided to medicine by new biomolecular technologies and the genome project. The expected learning outcomes at the end of the course include the acquisition of appropriate language with specialized and clear terminology.

		Attainment of this knowledge will be supported and ensured by classroom lectures using slides, textbooks as well as lecture materials provided by the lecturer to the students.
Human Histology and Embryology	Histology	The educational activity of the discipline Histology aims to describe and bring to knowledge and understanding of the structure and ultrastructure, with biomolecular, functional and applicative hints, of human cells and tissues, through systematic, nosological and morphological analysis under the light and electron microscope of specific cell specializations and elements of tissue organization. The training activity also aims to introduce knowledge of the fundamental molecular mechanisms of histogenesis: the regulation of stemness, proliferation, and cell death. The study of the correlations between structure and function of normal cells and tissues also makes use of the analysis of histological preparations set up with histochemical and immunohistochemical techniques. Learning methods include the interactive study of digitized histological preparations under light and electron microscopes. The ultimate goal of the course is to equip the student with the knowledge that forms the basis for understanding organ and system anatomy and physiology, as well as possible correlations in pathology. HISTOLOGY The student should acquire the ability to understand the structural and ultrastructural organization of human tissues and the mechanisms of tissue histogenesis and regeneration. He/she should also understand the basics of tissue formation and development from the regulatory Of the processes of stem cell proliferation and self-maintenance. It will be essential to be able to recognize the specific morphological characteristics of the different tissues, the cells that are part of them and the supramolecular arrangements of the extracellular matrix being able to correlate them with the anatomical and functional aspects that oversee their integrity and inter-tissue integration in the composition of the different organs. In addition to mastering the correct histological classifications and in the 'morpho-functional interpretation of tissues, the knowledge attained must also include the specific repair, renewal and aging properties of each tissue, fundamental propaedeutical elements for the understanding of principles and applications of regenerative medicine. Finally, the student should know how to analyze the structural organization of histological (normal) preparations obtained by histochemical and immunohistochemical techniques in light microscopy and be able to recognize ultrastructural features in images of electron microscopy preparations.
	Embryology	The educational activity of the discipline Embryology aims to describe and bring about knowledge and understanding of the origin of embryonic cells and tissues, differentiation processes, and embryonic and fetal growth and development. Learning methods include the interactive use of three-dimensional digitized models concerning the main events of development and organogenesis. The ultimate goal of the course is to equip the student with the knowledge necessary for understanding the correlations between ontogeny, organogenesis, and anatomy and physiology of the infant and adult, as well as to provide the basis for understanding major developmental defects and malformative syndromes. EMBRIOLOGY The student should acquire basic knowledge of germ cell maturational patterns and their characteristics, biological processes underlying fertilization, cell differentiation, and morphodynamic events chronologically related to human embryonic/fetal development. This will provide an understanding of the formation of the final anatomical arrangement of the human body, as well as the mechanisms associated with the occurrence of congenital malformations in the various organs and systems. The student should also know structure, mode of maturation of embryonic adnexa in order to understand their functional significance, physiological implications and physio-

		pathological aspects related to pregnancy and different in vitro fertilization procedures.
	Cytology	The educational activity of the discipline of Cytology aims to describe and bring about knowledge and understanding of the structure and ultrastructure, with biomolecular, functional and applicative hints, of eukaryotic cells, and special emphasis is given to membrane specializations and junction devices both between cells and between cells and extracellular matrix. This will enable an understanding of how cells can, by assuming specific forms and functions, peculiarly characterize various tissues. CYTOLOGY The student will be expected to acquire the ability to understand the morphological organization of eukaryotic cells and subcellular structures, their genesis and their interrelationships. Particular emphasis will be given to membrane specializations and junction devices both between cells and between cells and extracellular matrix. This will enable an understanding of how cells can, by assuming specific forms and functions, peculiarly characterize various tissues.
Biochemistry	Biochemistry	The central objective of the course is to provide students with a method of critical reasoning about the biochemical-metabolic aspects of Medicine. Specifically, this course provides an overview of the major metabolic pathways and their functional correlations in the human organism. Biochemical processes that characterize the specialized function of different tissues and organs will also be described. The theoretical knowledge gained from this Biochemistry course will provide an essential basis for subsequent applications at the professional level. The central objective of the course is to provide students with a method of critical reasoning about the biochemical-metabolic aspects of Medicine. The course lays the foundation for understanding, from a molecular perspective, the complex processes underlying the metabolism of living things. Specifically, it aims to provide the student with knowledge of the main metabolic pathways (anabolic and catabolic) and their functional correlations in the human organism. Biochemical processes that characterize the specialized function of certain tissues and organs will also be described. The theoretical knowledge gained from this Biochemistry course will provide an essential basis for subsequent applications at the professional level.
Human Anatomy 1	Anatomy 1	The purpose of the training activity is to impart knowledge useful for students to understand the following fundamental aspects of human morphology: 1. All systems/apparatuses meet precise functional requirements 2. All systems/apparatuses comprise various organs functionally interconnected with each other 3. The cardiovascular, nervous and endocrine systems preside over the functional interconnection among all anatomical systems. On this basis, knowledge of the main concepts concerning: a. Normal macroscopic structure of the major organs and systems with emphasis on a topographical setting of the same, including their vasculature, lymphatic drainage and innervation b. Microscopic structure correlated with function c. Functional considerations applied to the understanding of morphological structure. The course is structured in a regional/topographic manner with hours of face-to-face teaching and interactive labs in Surface Anatomy, Regional and Topographic Anatomy on Anatomage Table, and Microscopic Anatomy labs, all conducted with small groups of students.

		During the discussion of the body regions and the organs and systems present there, special attention will also be given to highlighting the possible clinical implications of altering normal anatomy. The educational activity aims at the student's attainment of macroscopic morphological and microscopic structural knowledge of the human body with regard to all apparatuses and systems with the exception of the central and peripheral nervous system.
Human Sciences	History of Medicine	At the end of the course the student will be able to: Illustrate the contents and evolution of medical thought and practice over time Illustrate the different approaches to disease, pain and death over the centuries Describe the evolution of medical teaching from the Greek era to today
	Bioethics and Patient Safety	The themes of bioethics and patient safety are both in the training of the young doctor. During the educational activities and at the end of the same, the students will have to learn the general principles of Bioethics, from Hippocrates to the present day also through the acquisition of the general criteria of North American Bioethics as sanctioned by BEACHAMP and CHILDRESS. They will then be translated into applicative terms starting from the PRIMUM NON NOCERE. They therefore developed in the assumptions and application methodologies of patient safety. At the end of the course, therefore, the student will have the theoretical and applicative basis for an integrated and systemic approach to the patient and to healthcare, in the hope that it will be a guide for his future knowledge, knowing how to be and knowing how to be a doctor.
	Moral philosophy and medicine	Expected learning outcomes: • Theoretical knowledge and critical understanding of the onto-axiological foundations of ethics, origins and of the foundations of Bioethics; • Ability to apply knowledge in the ethical field to the many questions raised by the research science and technological progress in the medical-health field; • Development of a critical and autonomous ethical judgment supported by logical rigor and argumentative ability; Contents: bioethics as applied ethics, the epistemological, anthropological and moral foundations of bioethics, neuroethics, ethics of new technologies and medicine, analysis and discussion of cases
	Epidemiology	The didactic activity aims to train young doctors in the use of methods for assessing the need and demand for health of the population, as well as the results of health interventions, in order to support the diagnostic process in an overall framework -clinical and to provide a rationale for health planning activities
Microbiology, Clinical Microbiology and Parasitology	Microbiology and Clinical Microbiology	The course, for students of the 2nd year of the BEMC, aims to provide the basics of microbiology focusing both on the general and clinical aspects of the discipline, discussing pathogenic microorganisms and their general characteristics, and pathogenesis and pathologies of them. At the end of the course, the student will have acquired basic knowledge on the main bacteria, viruses and fungi, their pathogenicity and how to prevent infections. The student will be able to understand the complex microorganism/environment interaction and how

		pathogenic microorganisms can overcome human defense mechanisms causing disease Particular attention will be paid to clinical microbiology to understand the etiological agents of infection by system and type of patient, with epidemiological features, etiopathogenesis, clinical significance. Finally, the methods of microbiology laboratory investigation and the interpretative criteria will be illustrated.
	Parasitology	The teaching of parasitology aims to acquaint the student with the general concepts and theoretical basis related to the taxonomy, morphology and biological cycle of the main endo- and ectoparasites of medical interest. In addition, aspects of epidemiology, pathogenesis, hints on clinical manifestations, diagnosis and prophylaxis of parasitic diseases including those of zoonotic interest and caused by pathogens transmitted by arthropod vectors (i.e., ticks, fleas, mosquitoes, phlebotomas) and finally their importance in Public Health will be described. Specifically, the course will not only promote the acquisition of the skills necessary for knowledge of the biology of parasites of medical interest, but will also provide the student with the basis for the morphological recognition of parasites as etiological agents of disease useful for disease diagnosis. The acquisition of these aspects will be essential for the later years of the course when the student will carry out activities in the clinical setting. The student's ability to learn during the course will be stimulated by the interactivity of the lectures and the internship portion.
Clinical Methodology	Medical Semeiotics	The training activity aims to provide the student with the elements to: - understand the methods of clinical and instrumental diagnosis of the main pathologies of surgical interest; - perform a complete clinical examination and compile a medical record; - formulate a diagnostic hypothesis; - communicate clearly and in appropriate terms a clinical case; - relate properly to the patient, animal owner, and work colleagues.
	Joint Semiology	The course has the proposal to teach the basis of functional anatomy of the musculoskeletal system; the aim is that the students should be able to know the range of motion and the main function of the human joints and the localization of the muscles that are involved in movements, acting as levers with their attachments to the bones.
	Surgical Semeiotics	The training activity aims to provide the student with the elements to: - understand the methods of clinical and instrumental diagnosis of the main pathologies of surgical interest; - perform a complete clinical examination and compile a medical record; - formulate a diagnostic hypothesis; - communicate clearly and in appropriate terms a clinical case; - relate properly to the patient, animal owner, and co-workers. Lead the student to knowledge of diseases of surgical interest, with special reference to the signs and symptoms of diseases and instrumental diagnostic framing
	Elements of Emergencies and First Aid	Il corso si propone di formare i futuri medici sulle basi dell'approccio al paziente critico. Come tale, si da rilievo all'importanza dei parametri vitali (misurazione corretta, inquadramento in base all'età e alla condizione fisiopatologica del paziente, concetto di "trend" nella

		misurazione dei parametri vitali). Altro obiettivo formativo è introdurre i concetti di primo soccorso ai pazienti con arresto cardiaco, soprattutto per quanto concerne l'approccio iniziale (basic life support) per poi passare a quello avanzato (advanced cardiac life support) e ostruzione acuta delle vie aeree).
Human Anatomy 2	Anatomy 2	The training activity aims to complement the learning of Human Anatomy with the acquisition of macroscopic, microscopic, functional and clinical anatomy data of the Central Nervous System, Peripheral Nervous System and Organs of Special Senses. Expected Outcomes. At the end of the course, the Student should have acquired a set of knowledge preparatory to the study of Human Physiology, Medical and Surgical Pathologies (with special emphasis on Neurological Clinic, Neurosurgical Clinic, Psychiatric Clinic, Ophthalmological Clinic and Otolaryngological Clinic. In addition, the student should have acquired the basics of examining radiodiagnostic images and performing diagnostic and therapeutic maneuvers.
Human Physiology. Part 1.a	Physiology	In-depth knowledge of cellular physiology, muscle, cardiovascular, kidney, respiratory system with particular attention to functional, cellular and molecular aspects, in order to articulate the presentation in a logical way and improve students' understanding of the complex interactions between different body systems and how these interactions contribute to health and disease. In particular, the objectives of the course aim to: 1. Provide a robust and detailed understanding of human bodily functions, from the molecular to the systemic scale. 2. Provide a foundation for understanding pathophysiology, preparing students to understand how physiological dysfunctions lead to disease states. 3. Develop critical thinking and problem solving skills through the application of physiological principles. 4. Provide students with the skills to continue learning and stay current in the field of physiology throughout their professional careers.
Pathology and General Pathophysiology	Pathology and General Pathophysiology	The training activity aims to study the structural and functional changes that underlie diseases, delving into the role of the immune system. It also provides the methodological criterion to deal rationally with clinical issues in both diagnostic-therapeutic and preventive approaches. Specifically, the educational objectives relate to understanding the general mechanisms of organismal damage and inflammatory response; understanding the basic principles of immune response; understanding the general pathogenetic and pathophysiological mechanisms of plastic ; and understanding the molecular basis of 'oncology.
Human Physiology	Physiology	In-depth knowledge of the physiology of the nervous system, in particular: sensory system, motor systems, brain homeostasis and higher integration systems. The fundamental objective is to provide students with an in-depth understanding of the functioning of the organs and systems of the human body, with an emphasis on the nervous system. Through the integration of the knowledge acquired, the aim is to develop in the student the ability to apply physiological knowledge to clinical practice, contributing to the diagnosis and treatment of various medical conditions.

		Finally, we want to offer the opportunity to develop research skills through the critical reading of the scientific literature in the field of physiology
Pathology and General Pathophysiology	Pathology and General Pathophysiology	The training activity has the objective of studying the structural and functional modifications that are the basis of diseases, deepening the role of the immune system. It also provides the methodological criterion for rationally addressing the clinical problem both in the diagnostic-therapeutic and preventive approaches. In particular, the educational objectives concern the understanding of the general mechanisms of damage to the body and the inflammatory response; understanding of the fundamental principles of the immune response; the understanding of the general pathogenetic and physiopathological mechanisms of diseases; understanding the molecular basis of oncology
Cardiovascular and Thoracic Diseases	Cardiology	The educational activity aims to allow the student to acquire the basic concepts of heart and vessel diseases, cardiovascular semeiotics. introduction to coronary and peripheral medical and interventional therapy. training at the bedside and in specific specialty laboratories.
	Pneumology	To provide the student with the main notions regarding the knowledge of diseases of the respiratory system, both from the point of view of diagnostic framing and therapeutic approach.
	Thoracic surgery	The training activity, consistent with the declaratory statement of SSD MED/21, aims to provide an understanding of: - the pathophysiology, methodology, functional and instrumental semeiotics, and surgical therapy of diseases of the respiratory tract and thoracic structures, including oncologic thoracic surgery, emergency and urgent thoracic surgery, and lung transplantation; - the differences between traditional and minimally invasive thoracic surgery.
	Vascular surgery	The training activity aims to enable the student to acquire the basic concepts for the diagnosis and medical/surgical treatment of major arterial and venous diseases in accordance with national and European guidelines. The objectives specifically include: - Learn the pathophysiology and clinic of the most frequent arterial and venous diseases - Diagnose in independent judgment surgical diseases starting from the history integrated with the objective examination and then proceeding to the prescription, evaluation and interpretation of laboratory tests and imaging and instrumental diagnostics - Learning the medical treatment indications and prognosis of arterial and venous diseases Learning the basic principles of traditional and endovascular surgical procedures
	Cardiac Surgery	The training objectives of the cardiac surgery module are: to know the physiopathology, the functional semiotics, the classification of the various pathologies of the cardiovascular system subject to surgery; know the main types of cardiac surgery; know the technological evolutions, the therapeutic value and the risks of auxiliary or replacement mechanical systems of the heart; know the principles and techniques of extracorporeal circulation.
Sense Organs	ENT	Know the pathologies of the ear, nose, pharynx and

		larynx. Know the pathologies of the inner ear that manifest themselves with vertigo and balance disorders Know the principles of medical-surgical therapy of ENT pathologies
	Audiology and Phonetics	The training activity aims to direalize a correct diagnostic pathway of deafness and differential diagnoses. The training activity aims to address phoniatric issues and make the correct diagnosis.
	Maxillofacial surgery	The training activity aims to allow the student to learn the surgical anatomy of the maxillofacial district and to develop knowledge regarding the etiopathogenetic principles, diagnosis and treatment of the following pathologies: acquired and congenital malformations of the maxillofacial district, benign and malignant pathologies of the salivary glands, traumas affecting the maxillofacial district, obstructive sleep apnea syndrome, malignant and benign tumors of the head and neck district, osteolytic lesions of the jaw bones. The student will also have to acquire specific skills regarding the main reconstructive surgery techniques used in the maxillofacial field.
	Ophthalmology	The training activity aims to enable the student to learn the knowledge of the pathophysiology and clinic of pediatric and adult diseases of the visual apparatus; specifically it provides: § The learning of the underlying physical, biological, biochemical and anatomo-functional mechanisms of visual function, binocular vision and ocular motility; § The ability to know and apply ocular semeiology and its implications in the diagnosis and treatment of ocular, neurological and internist diseases; § To illustrate the aspects of the visual system from an anatomical and physiological point of view, and to describe the main ophthalmologic diseases of which the specific approaches and therapeutic options will be provided; § The 'learning of skills in functional and instrumental semeiotics, methodology and medical and surgical therapy in ophthalmology; § The Knowledge of the basic principles of traditional surgical procedures and techniques The educational activity aims to provide students and knowledge, skills and attitudes necessary to understand and manage diseases and disorders of the visual system. Specifically, the objectives are: Knowledge acquisition: the main objective is to provide students with a comprehensive understanding of the anatomy, physiology, and pathophysiology of the eye and its associated structures. Students should acquire knowledge about various eye diseases, their causes, symptoms, diagnostic methods and treatment options. Clinical skill development: students should develop the clinical skills needed to examine patients with ocular disorders. This includes learning how to perform a detailed ophthalmic examination, interpret the results and make appropriate diagnoses. In addition, they should gain proficiency in the use of ophthalmic instruments and techniques such as slit-lamp biomicroscopy, fundoscopy, and tonometry. Disease management: the goal is to educate students on the management and treatment of common ocular diseases. This includes understanding treatment options, both medical and surgical, and developing skills in prescribing medications, performing minor procedures and recognizing when to refer patients to specialists for advanced care.

		Communication and patient education: students should learn effective communication skills to interact with patients and their families. This includes explaining diagnoses, treatment plans, and prognoses in a clear and compassionate manner. They should also be able to provide appropriate patient education about eye health, preventive measures, and lifestyle modifications. Professionalism and Ethical Conduct: The goal is to instill professionalism and ethical conduct in students' interactions with patients, colleagues, and other healthcare professionals. Students are expected to understand and adhere to ethical principles, maintain patient confidentiality, demonstrate empathy, and practice within legal and regulatory frameworks. Research and lifelong learning: Fostering a culture of research and lifelong learning is essential. Students should be introduced to the importance of evidence-based medicine, research methodologies, and critical appraisal of scientific literature. They should develop skills to stay current with advances in the field and engage in CPD throughout their careers. By focusing on these educational goals, students can develop a strong foundation in ophthalmology and be prepared to provide competent and compassionate care to patients with eye problems.
	Dental diseases	The training activity aims to acquire knowledge, diagnosis and therapy of the main pathologies of odontostomatological interest. The student must acquire the elements of the clinical methodology for the correct execution of the first odontostomatological visit (medical record, anamnesis, informed consent, etc.) and must learn the dental medical terminology necessary for compiling the medical record; must have general knowledge of the most commonly used instrumental investigations. Must know about rare diseases. Techniques and types of sutures with theoretical and practical course.
Anatomo-Pathology Part 1.a	Anatomo-Pathology	The training activity aims to correlate tissue and organ morphological alterations with the diagnosis of disease. Tackle the program topics and introduce students to the anatomical-pathological diagnosis and classification of tumors of various organs following the guidelines updated from time to time by the WHO. To introduce the immunohistochemical and molecular diagnostic methods necessary for the differential diagnosis of disease. Introduce learners to the validation of histological samples subject to transplantation (renal, cardiac and hepatic). Exercise activities are planned for the course to be carried out in the laboratory following the daily diagnostic activity in order to make people understand the methods of carrying out the work of a pathologist "specialist" and possibly to retain the student by involving him also in research activities for a future choice . Activities and interviews dedicated to students with proven disabilities are planned for the course. They sell suggested modern study and research texts on search engines like pubmed. The training activity aims to introduce students to the study of the subject starting from tissue and organ morphological alterations to understand clinical symptoms and arrive at the diagnosis of disease, following the topics that can be addressed in the program and during the teaching semester . Make people understand how work is carried out in a Pathological Anatomy laboratory with medical risks and responsibilities. Introduce students to the innovative methods that support the anatomical-pathological diagnosis. Introduce learners to the autopsy examination and the need to resort to the autopsy response in selected cases or cases that are not of medico-legal relevance. In addition, educational activities are planned aimed at the possible presence of learners with documented disabilities.

		Training exercises are planned for the course in order to validate the knowledge and learning. Modern study texts are suggested.
Surgical and Medical Systemic Pathologies 1	Allergology and Clinical Immunology	The training activity aims to make the student acquire the fundamental principles that regulate the immune system. It essentially consists of two parts: a first part in which the student acquires the basics to know which are the cells and organs that make up the immune system, as well as the basic processes of recognition of pathogens as danger signals and the immunological mechanisms responsible for their elimination. A second part that allows the student to understand the mechanisms underlying the immunopathologies that originate from defects of the immune system or from an abnormal immune response that will be studied in depth in the clinical disciplines.
	Plastic surgery	Learning the fundamental principles on which the subject is based. In particular, the indications and methods of using the most basic techniques (sutures, grafts and flaps) are taught, with particular focus on the ultra-specialist areas of interest of the discipline such as the treatment of malignant tumors of the skin and soft tissues, post-oncological and post-traumatic reconstruction of various parts of the body, hand surgery, malformation pathology of the face (LPS) and hand, microsurgical treatment of lymphedema, medical and surgical treatment of burn patients, breast reconstruction and regenerative surgery .
	Infective Diseases	recognition of the clinical, prognostic and therapeutic features of tuberculosis, endchocarditis, meningitis, infections of the osteoarticular system, HIV/AIDS, COVID-19, zoonoses, parasitic diseases and emerging and re-emerging viral infections. Central nervous system infections, hepatitis, infections of the immune compromised, sepsis and septic shock. Principles of antibiotic therapy (classifications and correct use of antimicrobial therapies), recognition of the appropriate Infection Prevention Control standards. Correct indication to contact isolation, respiratory, droplet for pathogen".
	Dermatology	The training activity aims to raise awareness of the main skin diseases, above all through the recognition of elementary lesions and the correct use of diagnostic investigations. The topics are addressed from an etiopathogenetic, clinical and therapeutic point of view.
III Year Internship	Ophthalmology	Practical knowledge of the main diseases of the visual system
	ENT	Practical knowledge of the main diseases of the hearing system
	Thoracic Surgery	Practical knowledge of the main diseases of the thoracic system
	Cardiac Surgery	Practical knowledge of the main diseases of the cardiac system
	Vascular Surgery	Practical knowledge of the main diseases of the vascular system
	Cardiovascular Diseases	Practical knowledge of the main heart diseases
	Plastic Surgery	Practical knowledge of the main activities of Plastic Surgery
	Allergology and Immunology	Practical knowledge of the main immunological and allergic diseases
	Dermatology	Practical knowledge of the main skin and venereal diseases
	Infective Diseases	Practical knowledge of the main infectious diseases
	Malattie apparato respiratorio	Practical knowledge of the main diseases of the respiratory system
	Pneumology	
Anatomo pathology	Anatomo-pathology	Introducing students to the study of the subject with lectures and laboratory exercises as indicated by the credits of the course. Verify the learning of the subject during the course.

		Addressing the difficulties of the individual learner with dedicated meetings if they have particular disabilities. Involve learners in training activities, including "in-house" conferences if open to the acquisition of training hours and pertinent to the topics being studied. Recommend modern textbooks that are indicated by the teacher at the beginning of the course.
Pharmacology	Pharmacology	Educational Objectives The course aims to provide the student with knowledge of the rational basis of drug therapy and the clinical applications of drugs. At the end of the course, the student must be able to evaluate and describe the general properties of a drug and to envisage its possible therapeutic uses, taking into account the structure, the mechanism of action, the kinetics as well as the relationship between pharmacological effects and toxicological. Expected learning outcomes By re-elaborating what they have learned during the lessons and in individual study, students must have acquired knowledge of the fundamental mechanisms that regulate pharmacokinetics and cellular and molecular pharmacology; the main factors responsible for the variability in drug response; the mode of action, side effects, drug interactions, indications and limitations to the clinical use of drugs active on the main neurotransmission systems, on the endocrine system, gastrointestinal, respiratory and cardiovascular. They must also have gained knowledge of the clinical use of anti-inflammatories, antimicrobial, antibiotic and antiviral drugs, and of the main traditional and biological antineoplastic agents. By integrating the knowledge and understanding acquired with this Course with those derived from other biomedical and clinical Courses of the Degree Course, the student must be able to know the rational bases of the clinical use of drugs and predict the pharmacological effects both in terms of diagnostic -therapeutic and toxicological. •Knowledge and understanding Students will need to demonstrate an understanding of the topics in the Pharmacology program •Ability to apply knowledge and understanding Students must be able to apply the acquired knowledge for the correct use of drugs in the diagnostic, preventive, curative and surgical support fields Autonomy of judgment The students, through the autonomous deepening of the notions learned and according to the ethical principles of reference, will have to be able to develop a good independence of judgment and analysis of problems related to the use of drugs •Communication skills Students will have to acquire the ability to transmit the knowledge learned in a clear and understandable way, bearing in mind the importance of adequate communicative-relational skills and a suitable property of language in building relationships with specialist (doctors) and non-specialist (patients) interlocutors) •Learning ability Students will have to acquire the right methodological approach to the study of the subject and the ability to refine and deepen their

		knowledge, continuing autonomously in updating the skills necessary to carry out the role of doctor
Diagnostic Imaging	Radiology	The training activity aims to provide the medical graduate with basic knowledge on the radiological semiotics of the main pathological conditions The training activity aims to provide medical graduates with basic notions on the descriptive appropriateness of the various imaging techniques The educational activity has the objective of providing the graduate in medicine with the basic notions of radiation protection Discussion of some pathological cases with evaluation of images and differential diagnoses in relation to what was dealt with in the frontal lessons
	Radiotherapy	The training activity aims to provide the basic knowledge of radiobiology to understand the mechanisms of interaction of ionizing radiation with biological systems. Furthermore, the fundamental principles and indications for oncological radiotherapy treatments for patients with malignant neoplasms are introduced during the course.
	Nuclear Medicine	The training activity aims to teach the fundamentals of Nuclear Medicine and multimodal imaging and more generally provide the necessary knowledge for the use of various radiopharmaceuticals in various fields of application. It also aims to provide useful elements for the interpretation of medical nuclear reports and images as well as the appropriateness of requests for scintigraphies and PET / CT examinations.
	Neuroradiology	The educational activity aims to provide the graduate in medicine with basic notions on radiological neuroanatomy The training activity aims to provide the medical graduate with basic notions on the different technologies used in the neuroradiological study, in particular with regard to advanced magnetic resonance sequences The educational activity aims to provide the graduate in medicine with basic notions on the radiological semeiotics of the main pathological pictures in the neuroradiological field Discussion of some pathological cases with evaluation of images and differential diagnoses in relation to what was dealt with in the frontal lessons
Laboratory Medicine and Genetics	Medical genetics	The training activity aims to provide students with the tools and theoretical concepts for understanding the basic principles of human genetics, to deepen the aspects of human molecular genetics and cytogenetics and to introduce them to the most advanced laboratory techniques necessary for a correct diagnostic and research approach to human diseases. The training activity has the following objectives: - acquire specific skills and knowledge related to the application of genetics in medical practice through the deepening of the genetic basis of human diseases, multifactorial diseases and the contribution of genetic factors to susceptibility to diseases; -develop skills in collecting detailed information on family history, consanguinity and other relevant hereditary characteristics; -develop skills on molecular approaches useful for the study of hereditary diseases and know how to interpret the results of cytogenetic and molecular analyzes of the human genome for genetic counseling purposes; - evaluate and interpret genetic tests: Students should be able to understand the different types of genetic tests available -evaluate the clinical relevance of the genetic variants identified and understand the limitations and implications of genetic tests for patients and their families.

		-develop skills in genetic counseling - Understand the ethical and social implications associated with the use of genetic information in medical practice
	Clinical pathology	• Acquire adequate skills for a good understanding and interpretation of laboratory tests useful in the diagnosis of human pathologies. • Being able to achieve good prescribing appropriateness based on the study of the correlation between pathophysiological and molecular mechanisms and alteration of diagnostic tests. The training activity aims to acquire skills in laboratory diagnostics in all conditions of physiopathology and human pathology as well as methodological skills for the use of even complex analytical instruments used in the diagnostic field, with particular regard to the collection, conservation and treatment of biological samples, also for the purpose of setting up biological banks.
	Clinical biochemistry and clinical molecular biology	Acquire skills in laboratory diagnostics in pathophysiological conditions; methodological for the use of even complex analytical instruments used in the diagnostic field; in the field of preventive, personalized and predictive medicine; for the use, development and implementation of the instrumentation of the Clinical Biochemistry laboratory, in particular the use of omic type equipment;
Neurological Science and Rehabilitation	Neurology	The course intends to provide the knowledge useful for understanding the aspects of the main neurological pathologies by deepening the pathophysiological, clinical, diagnostic and therapeutic aspects of the same
	Physical and Rehabilitation Medicine	Providing useful knowledge to understand all those effective means, in line with Evidence Based Medicine (EBM), in reducing the burden of disability and improving the possibilities for disabled people affected by pathologies of orthopedic-traumatological responsibility. Students will have to acquire the tools for understanding the general clinical areas of Physical and Rehabilitation Medicine in such disabling outcomes and through knowledge, also of the cultural evolution of rehabilitation intervention models, the student will be able to plan and verify the process of Rehabilitation Medicine, through objective evaluation methods and effective medical therapeutics, within the most suitable Rehabilitation Setting (Hospital, Territory), to promote the maximum possible recovery and integration of the person affected by the disabling outcomes of pathologies of the Locomotor Apparatus. Specifically, it aims to provide students with notions useful for knowledge and understanding, as regards: • Graduation in determining the underlying diagnosis. • Determination of functional capacity and ability to change. • Determination of activity and participation and contextual factors. • Setting up an Individual Rehabilitation Project in a multidisciplinary team. • Knowledge, experience and proposal for the application of rehabilitation treatments in the field of Rehabilitation Medicine. Pain assessment and knowledge of effective pain medications, in light of Law 38/2010.Valutazione e misura del risultato. Prevention and management of complications. Prognosis on disease/health condition and results of Rehabilitation Medicine. Knowledge of rehabilitation technology and in particular of Physical Therapies. How to prescribe Prostheses, Orthoses and Aids. Provide useful knowledge to understand the main aspects of the most frequent disabling pathologies in neurological diseases that require an adequate and shared rehabilitation process (project and program) within the rehabilitation team (physiatrist, physiotherapist,

		occupational therapist, nurse, speech therapist, etc. .) with particular reference to the integration of hospital (in disabling neurolesions with acute onset) and territorial (chronic and/or chronic-evolutionary diseases) rehabilitation activities. Through knowledge, also of the cultural evolution of neuro-rehabilitative intervention models, the student will be able to plan and verify the rehabilitation process, through effective objective evaluation and therapeutic methods, within the most suitable rehabilitation setting, to promote the maximum possible recovery and integration of the person affected by neurolesion. Specifically, it aims to provide students with notions useful for knowledge and understanding: • the meaning of "limited ability" and "restrictions on participation" according to the International Classification of Function, Disability and Health (I.C.F.); • the causes and the biological substrate of neurolesions; • of the rehabilitation models of stroke, vertebro-medullary trauma, Multiple Sclerosis, Parkinson's disease, Peripheral Paralysis; • overview, classification, etiopathogenesis, of disturbances of consciousness, general indices of severity and possible associated damages in cranial-brain trauma and coma with specific insights into treatment and rehabilitation in people affected by prolonged vegetative state, minimally conscious state and syndrome by Locked-in.
	Neurosurgery 1	The training activity aims to provide useful anatomical, physiological and pathophysiological knowledge of the most important conditions, both pediatric and adult, of neurosurgical interest. Anatomo-clinical correlations, differential diagnoses and principles of treatment are included. The training activity aims to provide a useful and clinically applicable knowledge of the most important pathological conditions of neurosurgical interest in both adults and children, also including anatomical-clinical correlations, differential diagnosis and treatment principles. The training activity aims to provide useful elements of knowledge of cranial and spinal traumatology, including principles of clinical, instrumental and treatment diagnosis. The training activity aims to provide useful elements of knowledge of the most important pathological conditions of neurosurgical interest in both adults and children, including principles of clinical, instrumental and treatment diagnosis. The training activity aims to provide useful elements of knowledge of the most important pathological conditions of neurosurgical interest in both adults and children, including principles of clinical, instrumental and treatment diagnosis.
Pharmacology	Pharmacology	Educational Objectives The course aims to provide the student with knowledge of the rational basis of drug therapy and the clinical applications of drugs. At the end of the course, the student must be able to evaluate and describe the general properties of a drug and to envisage its possible therapeutic uses, taking into account the structure, the mechanism of action, the kinetics as well as the relationship between pharmacological effects and toxicological. Expected learning outcomes By re-elaborating what they have learned during the lessons and in individual study, students must have acquired knowledge of the fundamental mechanisms that regulate pharmacokinetics and cellular

		and molecular pharmacology; the main factors responsible for the variability in drug response; the mode of action, side effects, drug interactions, indications and limitations to the clinical use of drugs active on the main neurotransmission systems, on the endocrine system, gastrointestinal, respiratory and cardiovascular. They must also have gained knowledge of the clinical use of anti-inflammatories, antimicrobial, antibiotic and antiviral drugs, and of the main traditional and biological antineoplastic agents. By integrating the knowledge and understanding acquired with this Course with those derived from other biomedical and clinical Courses of the Degree Course, the student must be able to know the rational bases of the clinical use of drugs and predict the pharmacological effects both in terms of diagnostic -therapeutic and toxicological. •Knowledge and understanding Students will need to demonstrate an understanding of the topics in the Pharmacology program •Ability to apply knowledge and understanding Students must be able to apply the acquired knowledge for the correct use of drugs in the diagnostic, preventive, curative and surgical support fields Autonomy of judgment The students, through the autonomous deepening of the notions learned and according to the ethical principles of reference, will have to be able to develop a good independence of judgment and analysis of problems related to the use of drugs •Communication skills Students will have to acquire the ability to transmit the knowledge learned in a clear and understandable way, bearing in mind the importance of adequate communicative-relational skills and a suitable property of language in building relationships with specialist (doctors) and non-specialist (patients) interlocutors) •Learning ability Students will have to acquire the right methodological approach to the study of the subject and the ability to refine and deepen their knowledge, continuing autonomously in updating the skills necessary to carry out the role of doctor
Surgical and Medical Systemic Pathologies 2	General Surgery	The training activity consists of lectures and has the objective of provide the student with the main surgical knowledge on epidemiology, pathogenesis, clinical manifestations, diagnosis and therapy of pathologies of the digestive tract (esophagus, stomach, small and large intestine), liver and pancreatic pathologies
	Gastroenterology	The educational activity consisting of frontal lessons has the objective of providing the student with the main knowledge of epidemiology, pathogenesis, clinical manifestations, diagnosis and therapy of pathologies of the digestive tract (esophagus, stomach, small and large intestine), liver pathologies and pancreatic
	Medical Oncology	The educational activity has the objective of making students aware of the epidemiology of neoplasms and the risk factors for their development

		The training activity aims to make students aware of the pathogenetic mechanisms of carcinogenesis, metastasis and tumor progression, as well as the basis of the immune response to tumors The training activity aims to prepare students to approach the oncological patient The training activity aims to make students aware of the principles of prevention, diagnosis (including molecular) and staging of tumors The training activity aims to bring students to the knowledge of the main therapeutic strategies in Oncology: • cytotoxic chemotherapy • therapies with a molecular target • hormonal therapies • immunotherapy The training activity aims to bring students to the knowledge of etiopathogenetic factors, clinical presentation and principles of therapy of the main solid neoplasms: • lung cancer and pleural mesothelioma; • prostate cancer; • bladder cancer; • kidney tumors; • melanoma; • breast cancer; • hepatocarcinoma and neoplasms of the biliary tract; • neoplasms of the gastrointestinal tract (esophagus, stomach, colorectal, GIST, NET) • primary and secondary skeletal neoplasms; • soft tissue sarcomas The training activity aims to bring students to the knowledge of the problems inherent in paraneoplastic syndromes The educational activity has the objective of making students aware of the general methodology of clinical studies in Oncology
	Hematology	Provide the tools to carry out clinical and laboratory diagnostics, prognostic stratification and therapeutic approaches of personalized and precision medicine for all neoplastic and non-neoplastic hematological diseases, with particular reference to: a) Innovations in the field of advanced diagnostic techniques (cytofluorimetry, cytogenetics, molecular biology); b) Treatments with targeted therapies, immunotherapies, autologous and allogeneic hematopoietic stem cell transplantation and other cell therapies; c) Multidisciplinary interactions; d) Training in conducting clinical trials.
Tirocinio IV anno	Neurosurgery	Practical knowledge of the main neurosurgical activities
	Anatomo-pathology	During the Pathological Anatomy internship, the trainee acquires skills relating to the diagnostic procedures of pathological anatomy. In particular: performs autopsies of small and large animals and examinations of isolated organs on viscera of animals for slaughter, with the production of appropriate reports; learns of the technical procedures for the preparation of preparations for histopathological and cytological examinations, and of the general criteria of interpretation and reporting in cytological and histological diagnostics.

	Radiology	Practical knowledge of CT, MRI, Breast exams
	Gastroenterology	Practical knowledge of the main gastroenterological diseases
	Hematology	Practical knowledge of the main blood diseases
	Medical Oncology	Practical knowledge of the main oncological diseases
	Clinical Pathology ClinicalBiochemist	Practical knowledge of analytical techniques, laboratory management, study of the analytical, pre-analytical and post-analytical phase with particular detail for poct systems.
	Neurology	Practical knowledge of the main neurological diseases
Muscular-skeletal Diseases	Orthopedics	The course has the proposal to teach the basis of clinical examination for complaints involving the musculoskeletal system, throughout visual inspection, tactil palpation, analysis of normal range of motion of joints and strenght of muscles. Finally, special test for each joint will be explained.
	Bioengineering and Motor Analysis	The course has the aim to teach epidemiology, ethiology, pathobiomechanics, main symptoms, clinical pathological findings, the most useful diagnostic tools, the possible complications and the medical and surgical options for treatment of the commonest traumatic disorders and degenerative diseases involving the musculoskeletal system.
	Rheumatology	The educational activity has the objective of making the student acquire knowledge of the pathophysiological and clinical problems relating to rheumatic diseases, including autoinflammatory and immune-mediated diseases. At the end of the module, the student will be able to recognize the common and rare pictures of osteo-articular and connective tissue diseases and their complications, identifying the conditions that require the professional contribution of the specialist, even in emergencies. Furthermore, since the current therapies of rheumatic diseases represent the most advanced and pioneering medical science is developing, the student, through an understanding of the immunological and molecular bases, will be able at the end of the course to understand the mechanisms of action of biological drugs and how these in turn have contributed to a better understanding of the molecular mechanisms underlying the rheumatic diseases themselves.
Psichiatria Psicologia e neuropsichiatria infantile	Psychiatry	The aim of the Psychiatry course is to provide the basis for a knowledge of psychiatric disorders, both in the etio-pathogenetic aspects and in the symptomatic and psychopathological ones, together with the basics of pharmacological treatment.
	Physiological Psychology	The course aims to illustrate the foundations of the general psychology of cognitive and emotional processes. It is also proposed to provide the basic knowledge useful for the application of general psychology to the field of medicine.
	Clinical Psychology	The objective of the Clinical Psychology course is to provide the epistemological, methodological and procedural foundations of clinical psychology applied to the study of the relationship between the individual and the family and to psychological and/or psychopathological functioning, with particular attention to the learning of assessment techniques psychodiagnostic and neuropsychological and therapeutic intervention.
	General Psychology	The course aims to illustrate the foundations of the general psychology of cognitive and emotional processes. It is also proposed to provide the

		basic knowledge useful for the application of general psychology to the field of medicine.
	Child Neuropsychiatry	The aim of the Child Neuropsychiatry course is to provide the foundations on the theoretical and practical foundations of the main psychopathological disorders of childhood and adolescence (0-18 years) from the etiopathogenesis to the clinical-diagnostic and treatment aspects. Educational objectives: To know the theoretical and practical foundations of etiopathogenesis, diagnosis and treatment in the main childhood-onset neuropsychiatric disorders Educational objectives: To know the theoretical and practical foundations of etiopathogenesis, diagnosis and treatment in the main psychopathological disorders with onset in childhood and adolescence
Patologia sistematica medico chirurgica 3	Endocrinology	The training activity aims to provide knowledge on the pathophysiology of the main endocrine glandular axes and systems of the body (e.g. hypothalamus-pituitary-thyroid/adrenal/gonads, parathyroids, pancreatic islets) and on the main associated pathological conditions with references to epidemiology, disease mechanisms, clinical picture, diagnosis and therapy. Furthermore, the training activity aims to provide knowledge on the physiopathology of glycidic and lipid metabolism and on the main metabolic pathologies (diabetes mellitus, obesity, dyslipidemia) with references to epidemiology, disease mechanisms, clinical picture, diagnosis and therapy. The frontal training activity and practical internship has the aim of transmitting theoretical, scientific and professional knowledge in the field of pathophysiology and clinics of diseases of the endocrine system and metabolism. In particular: fundamental aspects of endocrine pathophysiology, functional and instrumental endocrine-metabolic semeiotics, pathophysiology and clinics of pituitary, thyroid, parathyroid, adrenal, endocrine pancreas, gonad diseases; pathophysiology and clinic of metabolic diseases, with particular regard to obesity and glucose, lipid and electrolyte metabolism. The aim is to ensure that the student can acquire the fundamental elements to recognize, know how to evaluate and treat the main diseases of the endocrine system and metabolism: hypopituitarism, growth failure, pituitary adenomas and related clinical pictures, diabetes insipidus, hypo and hyperthyroidism, thyroid tumors, thyroiditis, hypo and hyperparathyroidism, adrenal insufficiency, s. Cushing's disease, adrenal cortical neoplasms, pheochromocytoma, neuroendocrine tumors, diabetes mellitus, obesity, gonadal axis disorders in men and women.
	Nutritional Science	The specific educational objectives of the study program differ on the basis of three application areas: Biomolecular area •know specifically the biochemical and physiological mechanisms of digestion and absorption; Biomedical area • know the main techniques for assessing the state of nutrition and know how to interpret the results for the purpose of dietary planning in the individual; •know the techniques and methods of measuring body composition and energy metabolism; •know the role of nutrition and diet to maintain an adequate state of health in physiological conditions, including the phases of life (growth, pregnancy, breastfeeding, senescence) and in sports; •know the role of nutrition during pathological conditions, allergies and intolerances; •know the methods and techniques underlying food surveys for the assessment of consumption and eating habits of individuals and communities for the purpose of nutritional surveillance;

		•knowing how to recognize the safe levels of substances contained or conveyed by the diet, including unwanted ones. Industrial/regulatory area know the main production techniques of food products with a high nutritional impact (functional foods, foods and supplements intended for particular nutritional uses, foods intended for special medical purposes, novel foods); •know the national and international regulatory issues in the food and food ingredients sector, including the nutritional labeling of foods and the labeling, health claims, registration and placing on the market of supplements and novel foods; •know the properties of nutrients and bioactive substances present in foods or used in the form of supplements.
	Urology	The training activity has the objective of acquiring skills regarding the diagnosis and therapy of the main diseases of the genitourinary system with particular regard to uro-oncological pathology. Furthermore, the training objectives include the acquisition of adequate knowledge about the diagnosis and management of urological emergencies and the learning of the basic concepts of renal transplantology
	Nephrology	The training activity aims to provide the student with the essential elements for the general theoretical and practical knowledge of the main primary and secondary diseases affecting the kidneys and the excretory pathways, allowing the achievement of the following training objectives: - a correct methodological and notional approach; - a characterization of the pathogenesis and histological picture of the main renal pathologies; - the acquisition of clinical pictures and knowledge of the differential diagnosis, the clinical course and possible complications. At the end of the course the student knows the basic notions of the main pathologies of nephrological interest in their acute phase and of the biochemical, instrumental and clinical investigations necessary for their diagnosis and hints of therapy. Thanks also to the participation in scheduled internships with discussion of clinical cases, at the end of the course the student has the theoretical-practical bases for recognizing the type of pathology by evaluating its clinical signs and laboratory/instrumental tests. Teaching methods Lectures and exercises/discussion of clinical cases Methods of verification and evaluation of learning The final exam aims to assess the achievement of the following educational objectives: - Know in detail the pathogenesis and clinical presentation of the main renal diseases. - Know the main diagnostic notions for the recognition of pathologies involving renal involvement. - Know the main notions of renal histology and histopathology related to the illustrated clinical pictures. - Know the essential elements of therapy of the treated pathologies with renal involvement.

		The exam is carried out in oral form with questions that relate to the educational objectives listed above, with a final grade out of thirty. The educational activity has the objective of providing the student with notional ("in-depth knowledge/learning"), practical ("in-depth practice") and guidance to autonomous research and in-depth ("resource investigation") elements following sectors: Definition, classification, diagnosis, prognosis and therapy of all pathological conditions of nephrological interest, including strategies for the prevention of chronic kidney disease, prevention of progression of chronic kidney disease and replacement therapy of impaired renal function (hemodialysis, peritoneal dialysis , kidney transplantation and other extracorporeal purification techniques)
Public Health	Forensics Medicine	The training activity has the objective of enabling new graduate doctors projected towards any specialization to acquire the doctrinal bases of the law applied to medicine (notions of private law and laws of medical interest) The training activity has the objective of enabling new graduate doctors projected towards any specialization to acquire the fundamental knowledge of medico-legal thanatology and the main categories of harmfulness of interest in medico-legal pathology The training activity has the objective of enabling new graduate doctors projected towards any specialization to acquire the doctrinal bases of civil disability, INPS, insurance medicine for accidents at work, occupational diseases The training activity aims to enable newly graduated doctors projected towards any specialization to acquire the doctrinal bases of forensic toxicology The training activity has the objective of enabling new graduate doctors projected towards any specialization to acquire the doctrinal foundations of general criminology and forensic psychopathology
	Occupational Medicine	The training objective of the course is the acquisition of the main knowledge concerning the Consolidated Law on Health and Safety at Work (Legislative Decree 81/08), health surveillance, the fundamentals of environmental and biological monitoring, the prevention of accidents at work and occupational diseases, occupational risk from exposure to biological, physical, chemical, carcinogenic agents, indoor and outdoor pollutants such as xenobiotics and asbestos, as well as occupational psychosocial risks (i.e. work-related stress), new emerging risks and the promotion of health in the workplace from the point of view of total worker health.
	General and Applied Hygiene Environmental Hygiene	The training activity aims to provide future doctors with the methodological and content elements relating to the Public Health area. In particular, the student must acquire knowledge relating to the epidemiology of infectious and chronic non-communicable diseases, environmental and hospital hygiene, epidemiological methodology and vaccination prophylaxis, business organization, health promotion, as well as the ability to dealing with health problems from the perspective of population health, global health and community medicine. The student must acquire communication skills to individual patients and the population relating to the major problems of contemporary public health and the management of public health emergencies.
Pediatrics Science	Pediatrics	The training activity aims to implement the knowledge of the main medical and surgical pathologies of the pediatric age, starting from the

		neonatal age up to adolescence, the tools for their prevention, the methods for collecting the anamnesis and the communication with the caregivers, the execution of the physical examination, the detection and interpretation of the vital parameters, of the anthropometric measurements based on the percentile tables, of the laboratory and instrumental tests, in relation to the specificities of the different pediatric ages.
	Pediatrics Surgery	
Gynecology and Obstetrics	Gynecology and Obstetrics	The training activity has the objective of acquiring skills regarding: 1. Knowing how to perform a correct medical history and physical examination in obstetrics and gynecology; 2. Know the obstetric and gynecological anatomy and physiology; 3. Know the main characteristics of spontaneous delivery and caesarean section; 4. Know the main characteristics of obstetric pathologies 5. Know the main characteristics of gynecological oncological pathology; 6. Know the main characteristics of benign gynecological pathology; 7. Know the main characteristics of the physiopathology of reproduction; The training activity aims to acquire skills concerning the main pathologies of pregnancy and the peripartum period, obstetric emergencies, prenatal diagnosis, placental pathology and the management of infections in pregnancy and recommended vaccinations The training activity aims to provide the learner with the essential knowledge indispensable in order to: 1 collect an adequate specialist anamnesis 2 adequately frame the symptomatology 3 to direct a diagnostic pathway 4 formulate a diagnostic hypothesis 5 orient a treatment for the correct management of the patient The activity is mainly oriented on anatomy, on gynecological and obstetric physiology, on the epidemiology of the main pathological conditions, on hormonal therapies, on the main pathologies capable of influencing fertility (both benign and malignant) The training activity aims to make the learner acquire skills concerning the physiology of the vaginal ecosystem, paying particular attention to the main infectious pathologies of the same. Specific in-depth analysis is dedicated to the pathology of the lower genital tract from HPV and to the potential evolution of this condition into dysplasia or neoplasia. The main screening techniques for cervical dysplasia are then discussed. A further educational objective is the acquisition of skills relating to the physiology of childbirth by describing the main postpartum hemorrhagic pathologies. Finally, issues relating to twin pregnancy and the main pathologies of single-chorionic twin pregnancy are addressed. A better usability of the lessons is favored by a good knowledge of pelvic anatomy, embryology of the first four weeks of development, hygiene-epidemiology. The main teaching method is frontal teaching. Reference texts adopted: "Manual of gynecology and obstetrics (Pescetto, de Cecco)" teacher's notes. The training activity aims to acquire skills concerning the main pathologies of pregnancy and the peripartum period, obstetric emergencies, prenatal diagnosis, placental pathology and the management of infections in pregnancy and recommended vaccinations
V Year Internship	Gynecology and Obstetrics	Practical knowledge of the main gynecological diseases
	Endocrinology	Practical knowledge of the main endocrinological diseases
	Urology	Practical knowledge of the main urological diseases
	Nephrology	Practical knowledge of the main kidney diseases

	Rheumatology	Practical knowledge of the main rheumatological diseases
	Orthopedics	Practical knowledge of the main diseases of the musculoskeletal system
	Pediatrics	Practical knowledge of the main pediatric diseases
	Child Neuropsychiatry	Practical knowledge of the main diseases of child neuropsychiatry
	Psychiatry	Practical knowledge of the main psychiatric diseases
	Forensics Medicine	the acquisition of knowledge in the clinical field on the cadaver must be verified
	Hygiene	During the internship, the student will have to acquire skills related to venous sampling maneuvers, execution of the Mantoux test and administration of vaccines.
	Occupational Medicine	the acquisition of knowledge in the clinical field on workers must be verified
Clinical Medicine and Geriatrics	Internal Medicine	The teaching of Internal Medicine in the Integrated Course of Medical Clinic, Genetics and Geriatrics aims to provide the sixth year student with diagnostic and therapeutic skills in the field of internal medicine, genetic and geriatric pathologies in order to complete the professional profile as a future doctor . Specifically, the student must perfect his ability to carry out a differential diagnosis of diseases starting from the symptoms and clinical signs, combining these data with instrumental and laboratory data. The student must also learn the therapy of the main diseases of internal interest.
	Geriatrics	Know the medical problems most frequently encountered in the elderly population At the end of the training course, the student must be able to: describe pathophysiology, diagnosis, treatment prevention of geriatric syndromes such as: chronic pain; dementia and delirium; falls and movement disorders; sensory disturbances; malnutrition and sarcopenia; pressure ulcers; urinary and fecal incontinence; describe pathophysiology, diagnosis, treatment prevention of the most common age-related diseases such as: - cardiovascular disease (including heart failure cardiac and arterial hypertension); - cerebrovascular disease and stroke; chronic obstructive pulmonary disease and pneumonia; depression; diabetes: Develop the necessary skills conduct the multidimensional geriatric assessment through the use of the appropriate tools under examination of: simple and complex activities of daily life; cognitive abilities; gait and balance; nutritional status. adequate (over- and under-prescription; inappropriate use of drugs) and polypharmacy in the elderly; careful consideration of personal preferences and values in treatment decision-making.

		define the criteria of the International Classification of Functioning, Disability and Health (ICF) of the World Health Organization; define the concept of frailty in the population elderly; define the geriatric multidimensional assessment and know its characteristics; interpret the results of the multidimensional geriatric evaluation and, in the event of pathological findings, initiate appropriate management and treatment pathways The training activity aims to provide the basics: of the epidemiology and biology of aging, of the Multidimensional Assessment of the elderly person, of the use of tools such as the "Multidimensional Prognostic Index" in clinical decisions in the elderly, of prescribing appropriateness of drugs in the geriatric age and the risk of adverse reactions, the classification of geriatric syndromes (frailty, delirium, sleep disturbances, falls, bed rest syndrome), dementia, depression in the elderly, malnutrition, sarcopenia, osteoporosis, fractures, gastroenterological diseases of geriatric interest, infections in the geriatric age, management of the elderly in different clinical settings, clinical decisions in the terminally ill and notes on innovations in research in geriatrics
	Family Medicine – Community Medicine	*Cultural aspects and reference healthcare context* *Family Medicine-Community Medicine is the branch of medicine that incorporates the cultural and assistance contents of Primary Health Care (WHO).* *The cultural contents of Family Medicine-Community Medicine refer to:* *1.Health (multidimensional health);* *2. Patient and family (centrality of patient and family, complex patient, caregiver of complex patient, participation of patient and family);* *3. Offer of services and professionals (global and integrated offer, continuity of care and assistance, network services, multi-professional-interdisciplinary team, coordination, therapeutic education, therapeutic alliance);* *4. Results (global acceptance, cost sustainability, appropriateness);* *5. Outcomes (effects on health, autonomy, quality of life, satisfaction)* *The healthcare context of Community Medicine is represented by the territorial services integrated with the hospital.* *The tools of Family Medicine-Community Medicine are: 1. Traditional diagnostic-therapeutic clinical tools; 2. Tools for the assessment of health complexity (ICD-10, CIRS), care complexity (Barthel), environmental complexity (ONAS file); 3. Multidimensional assessment tools (ICF Checklist); 4. Tools for drawing up individual care plans (PAI form); 5. Therapeutic education tools (specific sheets); 6. Management tools (procedures, coordination)* *Attività didattica* The training activity aims to provide the basic concepts and methodological tools that underlie Family Medicine-Community Medicine, i.e. identify the main objective of the doctor in the care of the person inserted in his family context and in the community, having the difference between a medicine centered on the person and one centered on the disease is clear.

		The "complex patient" is described (patient with health, care and environmental complexity) and the main treatment paths that can be implemented in hospital are indicated (paths between OUs with different care intensity), at hospital discharge (assisted discharge and transfer to home or residential regimen), in territorial services (care pathways for chronic pathologies); The complex patient and his family are described by focusing on his "caregiver", with care and assistance pathways for global management; the application of the bio-psycho-social approach and the application of the Protected Hospital Discharge procedure (PDO) and taking charge of the patient with co-morbidity in ADI or RSA. Specifically, the student must acquire the following skills: • Prevention, diagnosis, treatment of high-impact chronic diseases in the population. • Management of complexity and polypathologies particularly developed in the frail and elderly population. • Gestione delle patologie acute di più frequente riscontro nella comunità, sapendo cogliere i segnali di allarme e gli indicatori di gravità clinica. • Use of basic semiotics, including some instrumental maneuvers (reading and interpretation of the ECG, Spirometry, ultrasound, etc..). • Application of the techniques that characterize the clinical methodology of General Medicine with particular regard to the ability to face and solve complex problems, manage non-specific and indistinct symptoms, operate in conditions of diagnostic uncertainty. • Activation of prevention, diagnosis, therapy and assistance pathways also on the basis of specific gender differences. • Management of the patient's end of life in coordination with the support network, knowing and applying the palliative approach, especially for the organ end stage and the law 219/2017 (Regulations on informed consent and advance dispositions of treatment). • Knowledge of the ethical rules and those contained in the Conventions in force for General Medicine which regulate its activity. • Integration with other professionals within communities of practice, working groups, including multi-professional ones, sharing and respecting diagnosis and treatment pathways. • Raising awareness of prevention and health promotion campaigns promoted by the NHS.
Clinical Surgery	General Surgery	The training activity aims to provide the student with useful, sufficient and adequate knowledge to: - diagnose the main surgical diseases; - perform a differential diagnosis between the various pathologies; understand the basic elements of the relative surgical therapie Lead the student to the knowledge of pathologies of surgical interest, with particular reference to therapy and introduce them to the training course in the operating room
Medical – Surgical Emergencies	Anesthesiology	The course aims to train future doctors on the basics of general and loco-regional anesthesia. In particular, the pharmacological principles and phases of "balanced" surgical anesthesia (pre-operative evaluation, pre-anesthesia, induction, maintenance and awakening, treatment of post-operative pain) and post-operative intensive care

		will be taken into consideration, with a view to training the student to modern "perioperative" medicine
	Intensive Care	The course aims to train future doctors on the advanced approach to the critically ill patient (with impairment of one or more organs or vital functions). Therefore, it will preliminarily focus on the determinants of arterial oxygen availability and the oxygen availability/extraction ratio. On these bases, the pathophysiological characteristics of cardiac arrest and consequent post-anoxemic coma, circulatory shock of various kinds, sepsis, anaphylaxis and severe acute respiratory failure will be treated, describing the possible therapeutic and pharmacological-instrumental approaches to these pathologies. also to train the student on advanced extracorporeal life support techniques in the treatment of refractory hypoxemic-hyperceptive acute respiratory failure (veno-venous ECMO) and severe heart failure.
	Pain Therapy	With the aim of providing students with elements of a diagnostic and therapeutic approach for the treatment of acute and chronic pain, they deal with the definition, pathogenesis and physiopathology and treatment of acute and chronic pain as well as the pharmacokinetics, pharmacodynamics, indications and side effects of the main drugs for the pain treatment and interventional techniques of electrical and pharmacological neuromodulation.
	Palliative Care	With the aim of providing students with elements of palliative care, the concepts of definition of palliative care, end of life, terminal phase will be introduced, the provisions of law 38/2010 will be examined as well as the concept of simultaneous care and continuity of care and the models of care in patients with cancer in the various care "settings".
	Surgical Emergencies and ER	provide basic knowledge of acute traumatic and non-traumatic surgical situations, their complications, the pathophysiological mechanisms that determine them and possible treatments.
	Medical Emergencies and ER	The teaching of EMERGENCY MEDICINE AND FIRST AID in the Integrated Course of MEDICAL-SURGICAL EMERGENCIES aims to provide the sixth year student with the necessary skills for the correct diagnostic-therapeutic iter of internal pathologies that present themselves with a useful urgency to the development of the part of the practical professional profile of the future doctor. Specifically, the student must perfect his ability to carry out a differential diagnosis of internal diseases with urgent characteristics starting from the symptoms and clinical signs, combining these data with first and second level instrumental and laboratory data useful for rapid diagnosis . The student must also learn the emergency therapy of the aforementioned pathologies. The training activity aims to provide the basics for the management of the main pathologies of interest in the emergency-urgency departments such as: ischemic heart disease, acute coronary syndrome, pulmonary embolism, acute dissection of the aorta acute pericarditis, chest pain diagnosis and treatment, cardiac insufficiency, acute cardiogenic pulmonary oedema, ARDS, syncope, acute respiratory insufficiency, acid-base disturbances, blood gas

		interpretation, hypertensive emergencies, shock, acute bronchial asthma, management coma internal medicine
VI Year Internship	Internal Medicine	the acquisition of knowledge in the clinical field of internal medicine patients must be verified
	General Surgery	the acquisition of knowledge in the clinical field on surgical patients must be verified
	Anesthesiology	the acquisition of knowledge in the clinical field of critically ill patients must be verified
Practical Traineeship	Medical Traineeship	Acquisition of the management of the patient of internal interest
	Surgical Traineeship	Acquisition of patient management of surgical interest
	Traineeship with General Practitioner	Acquisition of the management of General Medicine patients

Tabella 4.2. Study course in Medicine and Surgery: training course planned for full-time students for the cohort a.y. 2023/24

Integrated course	Teaching	SSD	CFU/ECTS			TAF	MV	Propaedeutic Si refer paragraph 4.5
			Total	Lesson	Practical technical activity			
Chemistry and Propaedeutic Biochemistry	Chemistry and Propaedeutic Biochemistry	BIO/10	6	60		A	O/S	
Medical physics, Medical Statistics	Medical Physics	FIS/07	6	60		A	O/S	
	Medical Statistics	MED/01	5	50		A	O/S	
Applied and Molecular Biology	General Biology	BIO/13	4	40		A	O/S	
	General Genetics	BIO/13	2	20		A	O/S	
Computer, linguistics and Professional Skills	English	L-LIN/12	4	40		B	I	
	Informatics	INF/01	1	10		B	O/S	
	Health and Work Safety	MED/44	1	10		C	O/S	
	Nursing Science	MED/45	2		24	C	O/S	
Applied and Molecular Biology	Molecular Biology	BIO/11	3	30		A	O/S	
Human Histology and Embryology	Histology	BIO/17	5	40	12	A	O/S	
	Embryology	BIO/17	3	30		A	O/S	
	Cytology	BIO/17	1	10		A	O/S	
Biochemistry	Biochemistry	BIO/10	8	80		A	O/S	
Human Anatomy 1	Anatomy 1	BIO/16	10	90	12	A	O/S	
Human Sciences	History of Medicine	MED/02	1	10		B	O/S	
	Bioethics and Patient Safety	MED/43	1	10		C	O/S	
	Medical and Moral Philosophy	M-FIL/03	1	10		C	O/S	
	Epidemiology	MED/42	1	10		B	O/S	
Microbiology, Clinical	Microbiology and Clinical	MED/07	5	50		B	O/S	

Microbiology and Parasitology	Microbiology							
	Parasitology	VET/06	2	10	12	C	O/S	
Clinical Methodology	Medical Semiotics	MED/09	4	30	12	B	O/S	
	Joint Semiology	MED/33	1	10		B	O/S	
	Surgical Semiotics	MED/18	4	30	12	B	O/S	
	Elements of Emergencies and First Aid	MED/41	1	10		B	O/S	
Human Anatomy 2	Anatomy 2	BIO/16	6	60		A	O/S	
Human Physiology Parte 1.a	Physiology	BIO/09	9	90		A	O/S	
Patologia e Fisiopatologia generale	Pathology and General Pathophysiology	MED/04	6	60		A	O/S	
Human Physiology	Physiology	BIO/09	7	70		A	O/S	
Patologia e Fisiopatologia generale	Pathology and General Pathophysiology	MED/04	6	60		B	O/S	
Cardiovascular and Thoracic Disease	Cardiology	MED/11	5	50		B	O/S	
	Pneumology	MED/10	3	30		B	O/S	
	Thoracic Surgery	MED/21	2	20		B	O/S	
	Vascular Surgery	MED/22	2	20		B	O/S	
	Cardiac Surgery	MED/23	2	20		B	O/S	
Sense Organs Clinical Medicine and Surgery	ENT	MED/31	2	20		B	O/S	
	Audiology and Phonetics	MED/32	1	10		B	O/S	
	Maxillofacial Surgery	MED/29	1	10		B	O/S	
	Ophthalmology	MED/30	2	20		B	O/S	
	Dental Diseases	MED/28	1	10		B	O/S	
Anatomo-Pathology Part 1.a	Anatomo-Pathology	MED/08	8	80		B	O/S	
Surgical and Medical Systemic Pathologies 1	Allergology and Clinical Immunology	MED/09	1	10		B	O/S	
	Plastic Surgery	MED/19	2	20		B	O/S	
	Infective Diseases	MED/17	3	30		B	O/S	
	Dermatology	MED/35	2	20		B	O/S	
III Year Internship	Ophthalmology	MED/30	1		12	F	O/S	
	ENT	MED/31	1		12	F	O/S	
	Thoracic Surgery	MED/21	1		12	F	O/S	
	Cardiac Surgery	MED/23	1		12	F	O/S	
	Vascular Surgery	MED/22	1		12	F	O/S	
	Cardiovascular Diseases	MED/11	1		12	F	O/S	
	Plastic Surgery	MED/19	1		12	F	O/S	
	Allergology and Immunology	MED/09	1		12	F	O/S	
	Dermatology	MED/35	1		12	F	O/S	
IV Year Internship	Infective Diseases	MED/17	1		12	F	O/S	

	Pneumology	MED/10	1		12	F	O/S	
Anatomo pathology	Anatomo-pathology	MED/08	4	40		B	O/S	
Farmacology	Pharmacology	BIO/14	3	30		B	O/S	
Diagnostic Imaging	Radiology	MED/36	3	30		B	O/S	
	Radiotherapy	MED/36	1	10		B	O/S	
	Nuclear Medicine	MED/36	1	10		B	O/S	
	Neuroradiology	MED/37	1	10		B	O/S	
Laboratory Medicine and Genetics	Medical Genetics	MED/03	5	50		A	O/S	
	Clinical Pathology	MED/05	3	30		B	O/S	
	Clinical Biochemistry and Clinical Molecular Biology	BIO/12	3	30		B	O/S	
Neurological Science and Rehabilitation	Neurology	MED/26	4	40		B	O/S	
	Physical and Rehabilitation Medicine	MED/34	2	20		B	O/S	
	Neurosurgery 1	MED/27	1	10		B	O/S	
Framacology	Pharmacology	BIO/14	6	60		B	O/S	
Surgical and Medical Systemic Pathologies2	General Surgery	MED/18	1	10		B	O/S	
	Gastroenterology	MED/12	3	30		B	O/S	
	Medical Oncology	MED/06	2	20		B	O/S	
	Hematology	MED/15	2	20		B	O/S	
IV Year Internship	Neurosurgery	MED/27	1		12	F	O/S	
	Anatomia Patologica Anatomo-pathology	MED/08	1		12	F	O/S	
	Radiology	MED/36	1		12	F	O/S	
	Hematology	MED/12	1		12	F	O/S	
	Medical Oncology	MED/15	1		12	F	O/S	
	Medical Oncology	MED/06	1		12	F	O/S	
	Clinical Pathology Clinical Biochemistry	BIO/12 MED/05	1		12	F	O/S	
	Neurology	MED/26	1		12	F	O/S	
Muscular-skeletal Diseases	Orthopedics	MED/33	3	30		B	O/S	
	Bioengineering and Motor Analysis	ING-IND/34	1	10		A	O/S	
	Rheumatology	MED/16	2	20		B	O/S	
Psychiatry, Psychology and Child Neuropsychiatry	Psychiatry	MED/25	3	30		B	O/S	
	Physiological Psychology	M-PSI/02	1	10		C	O/S	
	Clinical Psychology	M-PSI/08	2	20		B	O/S	
	General Psychology	M-PSI/01	1	10		A	O/S	
	Child Neuropsychiatry	MED/39	2	20		B	O/S	

Surgical and Medical Systemic Pathologies 3	Endocrinology	MED/13	4	40		B	O/S	
	Nutritional Science	MED/49	1	10		B	O/S	
	Urology	MED/24	2	20		B	O/S	
	Nephrology	MED/14	3	30		B	O/S	
Public Health	Forensics Medicine	MED/43	5	50		B	O/S	
	Occupational Medicine	MED/44	5	50		B	O/S	
	General and Applied Hygiene	MED/42	3	30		B	O/S	
	Environmental Hygiene	MED/42	2	20		B	O/S	
Pediatrics Science	Pediatrics	MED/38	5	50		B	O/S	
	Pediatrics Surgery	MED/20	1	10		B	O/S	
Gynecology and Obstetrics	Gynecology and Obstetrics	MED/40	6	60		B	O/S	
V Year Internship	Gynecology and Obstetrics	MED/40	2		24	F	O/S	
	Endocrinology	MED/13	1		12	F	O/S	
	Urology	MED/24	1		12	F	O/S	
	Nefrology	MED/14	1		12	F	O/S	
	Reumatology	MED/16	1		12	F	O/S	
	Orthopedics	MED/33	1		12	F	O/S	
	Pediatrics	MED/38	1		12	F	O/S	
	Child Neuropsychiatry	MED/39	1		12	F	O/S	
	Psichiatry	MED/25	1		12	F	O/S	
	Forensic Medicine	MED/43	1		12	F	O/S	
	Higiene	MED/42	1		12	F	O/S	
	Occupational Medicine	MED/44	1		12	F	O/S	
Clinical Medicine and Geriatrics	Internal Medicine	MED/09	4	40		B	O/S	
	Geriatrics	MED/09	2	20		B	O/S	
	Family Medicine – Community Medicine	MED/09	1	10		B	O/S	
Clinical Surgery	General Surgery	MED/18	6	60		B	O/S	
Medical – Surgical Emergencies	Anesthesiology	MED/41	1	10		B	O/S	
	Intensive Care	MED/41	2	20		B	O/S	
	Pain Therapy	MED/41	1	10		B	O/S	
	Palliative Care	MED/41	1	10		B	O/S	
	Surgical Emergencies and ER	MED/18	2	20		B	O/S	
	Medical Emergencies and ER	MED/09	2	20		B	O/S	
VI Year Internship	Internal Medicine	MED/09	7		84	F	O/S	
	General Surgery	MED/18	7		84	F	O/S	
	Anesthesiology	MED/41	1		12	F	O/S	

Practical Traineeship	Medical Traineeship	MED/09	5		60	F	O/S	
Practical Traineeship	Surgical Traineeship	MED/18	5		60	F	O/S	
Practical Traineeship	Traineeship with General Practitioner	NN	5		60	F	O/S	

4.2. Elective courses and activities chosen by the student

The educational activities chosen by the student are provided for in the study plan for a total of eight (8) credits to be acquired. Attendance at ADE is 100% compulsory.

Elective teaching activities chosen by the student (ADE):

- activities aimed at the acquisition of "Transversal Skills" programmed by the University and available on the institutional website https://www.uniba.it/didattica/competenze-trasversali, provided they are recognized as consistent with the training process by the Board of the Study Course in Medicine and Surgery;
- activities proposed and approved annually by the Council of the Study Course in Medicine and Surgery:

ADE	hours	CFU
Seminar/tutorial monodisciplinary	2	0,20
Multidisciplinary seminar/tutorial	≥2	0,30
Elective internship	25	1
Conferences/Congresses	5h	0,50
Conferences/Congresses	>5h	1
Monographic course	≥5	0,50

4.3. Organization of teaching activities

All training activities correspond to the acquisition of credits, each of which is equivalent to 25 hours of total student commitment. The teaching plan provides for the acquisition of 360 credits distributed over 6 years of the course.
Each credit assigned to frontal lessons is equivalent to 10 hours, each credit assigned to practical activities and professional internship is equivalent to at least 12, finally each credit assigned to Practical Evaluation Internship (TPV) is equivalent to at least 20 hours of professional training activities.

The remaining portion of the training credit is available to the student for personal study.

The credits corresponding to each training activity are acquired by the student after passing the exam or following another form of verification of the preparation or skills achieved. The holders of the professional courses are responsible for the practical activities and/or professional training related to teaching.

The basic, characterizing, related and supplementary educational activities, chosen by the student, the training internships, including the practical evaluation internship, for the preparation of the practical test and the subsequent achievement of the final exam, are grouped into disciplinary fields to which they pertain the scientific-disciplinary sectors that contribute to defining the educational objectives of that area.The study plan organizes the educational activities envisaged by the disciplinary fields in single-disciplinary teaching courses and/or in integrated courses consisting of teaching modules characterized by different scientific-disciplinary sectors, defining for each of them: the number of credits assigned to each course or module; the educational activity of reference (basic, characterizing, related and/or supplementary, chosen by the student, internships); the year and semester of the course; d) the rules relating to the frequency of training activities; the methods of acquiring credits (exam or qualification); the prerequisites that must be respected in order to access the verification tests.

For integrated courses consisting of two or more teaching modules, the teacher in charge of the course to whom the highest number of credits are assigned assumes the role of coordinator of the integrated course (in case of equal credits, the full professors, associate professors, researchers, adjunct professors and, in the case of the same band, the greatest seniority). The coordinator, in agreement with the other teachers, has the task of organizing the specific teaching activities of the integrated course, of establishing the dates of the exam sessions, of presiding over the exam commission and of proposing its composition to the Course Coordinator of Study in Medicine and Surgery.

For each year of the course, the Council of the Study Course in Medicine and Surgery annually appoints, on the proposal of the Coordinator of the Study Course, a year coordinator with the task of organizing all the teaching activities pertinent to that year of the course.

The Council of the Study Course in Medicine and Surgery proposes to the School Council, within the established deadlines, the assignment of teaching courses and any other training activity to professors and researchers, having acquired their consent, on the basis of needs didactic characteristics of the Course and of the belonging of the teachers to the scientific-disciplinary sectors due to a balanced distribution of the teaching load.All the teaching activities (lessons, tutorials, seminars, laboratory and supplementary activities, practical activities, professional internship) of the course years are organized in two semesters: the first semester begins within the first ten days of October and ends within January; the second semester begins within the first ten days of March and ends within the first half of June. The timetable of the lessons is announced by publication on the website of the Study Programme.

The Study Program includes the following exam sessions: Winter (January – April), Summer (May – July) and Autumn (September – December).

The March and November exam sessions are scheduled in the week of teaching break, indicated at the beginning of each academic year so as not to interfere with the performance of teaching activities.

For sixth year students, out-of-course students and repeating students without compulsory attendance, a further exam session is scheduled in May; exams taken in May by students enrolled in the course will be officially cancelled.

Appeals must be spaced out for at least two weeks.
The exam calendar is announced within the month of September for all sessions for the following y
ear.
The final exams take place over three sessions distributed over the following periods: from June to September; from October to December; from February to April.

4.4. Attendance obligations

Each student is required to attend training activities for at least 67% of the hours scheduled for each integrated course. The verification of attendance is performed, according to the directives established by the Council of the Medicine and Surgery Course, by the teachers who are responsible for the training activities.
The certificate of attendance is sent to the Student Secretariat of the School of Medicine and is required to take the relevant exam. The student who has not obtained the certificate of attendance is enrolled in the following academic year, even as a surplus, as a repeater of the same year of the course, with the obligation to attend the courses for which he has not obtained the certificate.
The transition from one year to the next is allowed only to students who, at the end of the September exam session or, in any case, by the deadline of 30 April, have passed the barriers envisaged according to the following table:

To sign up for the …	***must have passed …***
II anno	16 CFU
III anno	40 CFU
IV anno	80 CFU
V anno	Fisiology
VI anno	Anatomo Pathology

The student who, despite having obtained the regular certificate of attendance to the courses envisaged in the study plan for a specific year of the course, is owed a number of exams higher than that provided for in the table above is enrolled in the same year with the qualification of "repeating", with no obligation to attend, without prejudice to different resolutions passed by the competent Council of the teaching structure for a justified resolution.

Students who, without having obtained the title, have already passed the normal duration of the master's degree course as enrollment and have obtained all the related certificates of attendance are enrolled as "**out of course**".

4.5. Propaedeutic

Students are required to respect the following cultural prerequisites :

Anno	Per sostenere l'esame di:	Occorre aver superato l'esame di:
1	Biochemisry	Chemistry and Propaedeutic Biochemistry
2	Human Anatoomy 1 e 2	Human Histology and Embryology
2	Medical semeiotics	Human Anatomy 1

2	Microbiology, Clin Microbiology and Parasitology	General and molecular biology
3	Fisiology	Medical Physics, Medical Statistics Biochemistry Human Anatomy 1 e 2
3	Pathology and General Pathophysiology	General Biology e General Genetics Biochemistry Human Anatomy 1 e 2
3	Cardiovascular and Thoracic Diseases	Human Anatomy 1 e 2 Biochemistry
3	Surgical and Medical Systemic Pathologies 1	Microbiology and Clinical Microbiology Parasitology Fisiology
4	Laboratory Medicine and Genetics	Biochemistry Pathology and General Pathophysiology
4	Anatomo pathology	Fisiology Pathology and General Pathophysiology
4	Surgical and Medical Systemic Pathologies 2, 3 Muscular-skeletal Diseases	Fisiology Pathology and General Pathophysiology
4	Diagnostic Imaging	Human Anatomy 1 e 2
4	Farmacology	Pathology and General Pathophysiology
4	Neurological Science and Rehabilitation	Fisiology
5	Public Health	Medical Physics, Medical Statistics Epidemiology Microbiology and Clinical Microbiology Parasitology Anatomo Pathology
5	Gynecology and Obstetrics	Anatomo Pathology
5	Pediatrics Science	Anatomo Pathology
6	Clinical Medicine and Geriatrics	Anatomo Pathology Semeiotica Medico-Chirurgica Surgical and Medical Systemic Pathologies1,2,3, Farmacology
6	Clinical Surgery	Anatomo Pathology Medical semeiotics Surgical Surgical and Medical Systemic Pathologies1,2,3 Farmacology
6	Medical – Surgical Emergencies	Anatomo Pathology Surgical and Medical Systemic Pathologies1,2,3 Farmacology Neurological Science and Rehabilitation

The internship exams of the III IV V VI year can be taken only after having acquired the frequency of the corresponding theoretical exam .

4.6. Profit checks

All assessments of student preparation, always individual and aimed at acquiring training credits, must take place in conditions that guarantee in-depth analysis, objectivity and fairness of the assessment in relation to the teaching or activity followed and with what is explicitly required for testing purposes.
These assessments consist of written and/or oral tests and give rise to marks (exams), apart from those relating to the English course and the activities chosen by the student, for which a judgment of suitability is formulated.
The verification of the frequency of practical and/or laboratory activities is the responsibility of the teacher/tutor in charge.
The exams and any other type of verification subject to registration can only be taken after the conclusion of the related courses.
The student in good standing with the enrollment and the relative payments can take all the exams and verification tests for which he possesses the certificate of attendance, where required, which in any case refer to completed teaching courses and in compliance with any propaedeutic requirements.
In the case of single-subject courses, the examination commissions are made up of at least two members, one of whom is always the course holder who acts as President of the commission; the others are professors of the same scientific-disciplinary sector or of a similar sector or experts in the subject . In the case of integrated courses, the examination commission is made up of all the teachers of the teaching courses constituting the integrated course and the functions of President are performed by the coordinator of the integrated course. Other professors from the same scientific-disciplinary sector or from a similar sector or experts in the subject can be part of the commission.
Commissions are validly constituted if at least two professors are present, one of whom must be the President. In the event of absence or impediment, the President will notify the Coordinator of the Study Program who will designate a replacement.
The exam takes place at the same time, also in rotation of the students among the teachers present, in the location and at the time available on the Esse3 portal.
It is allowed to take the exam of the integrated and single-subject courses defined in the study plan with all the Examination Boards identified by the Course:
 to repeating students,gli studenti fuori corso,

- to those enrolled in the sixth year of the C.d.L. in Medicine and Surgery, Educational System NOD bis, starting from the recovery sessions of each semester.
- The exam grade is given by the average weighted on the basis of the credits of the individual teaching activities. In the event that one or more parts of the exam are not passed, the Commission can keep the partial marks for the next three exam sessions that can be used by the student.

4.7. Internship

Practical evaluation internship: 15 credits are intended, it is aimed at ascertaining the student's abilities relating to the "know-how and knowing how to be a doctor" which consists in applying biomedical and clinical knowledge to medical practice, in solving questions of professional ethics

and medical ethics, in demonstrating an aptitude for solving clinical problems relating to the areas of medicine and surgery and related specialties, laboratory and instrumental diagnostics and public health.

The certification of attendance and the evaluation of the periods take place under the direct responsibility and care of the university professor or the medical director, responsible for the structure attended by the trainee, and the general practitioner, who issue, each for the part of their respective competence, formal attestation of attendance, together with the evaluation of the results relating to the skills demonstrated, and expressing, if positive, a judgment of suitability. (art. 3 of the decree of the Minister of Education, University and Research 9 May 2018, n. 58 and subsequent amendments,)

The aforementioned internship will take place for a number of hours corresponding to at least 5 credits. for each month and will be divided into the following periods, even if not consecutive: one month in the Surgical Area; one month in the Medical Area; one month, to be carried out, not before the sixth year of the course, in the specific field of General Medicine.

Internship - Professional training activities: the student, assisted by a tutor, carries out specific professional activities in the field of medicine, surgery and services. To this end, the student will have to carry out professional training activities by attending the assistance structures identified by the study program and in the periods defined by the same, for a total number of 54 credits. The clinical competence acquired with the vocational training activities is evaluated in the context of the examination of the Course in which these activities take place.

The Study Program can identify university care structures, of other universities in Italy and abroad, and non-university where the internship can be conducted, in part or in full

4.8. Procedures for verifying periods of study abroad

Outgoing and Visiting/Free Movers students who participate in the Erasmus program abroad cannot sit exams for subsequent years at the Bari office as this would conflict with the acquisition of attendance for the course year.

Outgoing and Visiting/Free Movers students participating in the Erasmus program follow the propaedeutic rules established by the educational system of the home institution

For Outgoing and Visiting/Free Movers students, attendance for courses scheduled during

the mobility period and not included in their Erasmus study program is automaticall recognized.

During the mobility period, Outgoing and Visiting/Free Movers students can take exams at the Bari office only for the periods: 1-31 July, 1-30 September, 9-23 December, and in the week that includes the previous 15 days and 15 days following the Easter holidays, provided that teaching activities are suspended at the foreign branch. The exams that can be taken in these periods are limited to courses for which the student has attendance and is due before departure or to courses scheduled during the mobility period for which students are exempt from the obligation to frequency.

The verification of study periods abroad for the purpose of validating the training activities is carried out by the Study Program Board, following a request from the interested party presented to the U.O. Teaching of the Interdisciplinary Department of Medicine

Students from other foreign universities within the Erasmus program (Incoming students):

• follow the same rules established for Uniba students;

• in case of need to take single exam modules or internships foreseen in the study plan, the Coordinator will take care of contacting the Dean of the SSD concerned to request an ad personam path, to be subsequently validated by the Erasmus Commission and the CdL Board .

4.9. Simultaneous enrollment in several courses of study

Starting from the a.y. 2022-2023 the simultaneous enrollment of students in two courses of study is allowed according to the provisions of law n. 33 of 12 April 2022 and the related implementing decrees.

Art. 5 – Incoming transfers, course transfers, recognition of previous activities

5.1. incoming transfer

For transfers from other Italian and foreign universities, the Study Course in Medicine and Surgery adapts to the provisions of the School of Medicine which establishes, by 31 July of each year, the number of places available for each year of the course.

Studies completed in Degree Courses in Medicine and Surgery of other Italian universities, in countries belonging to the European Union and in non-European countries, as well as the credits obtained in these, are recognized by resolution of the Course Council of Degree or by the Board of the Study Course in Medicine and Surgery, after examination by the Transfer and Equivalence Commission of the curriculum transmitted by the university of origin and of the programs of the single teaching modules accredited in that University.

5.2. Recognition of previous activities

All didactic activities, including any elective didactic activities envisaged by the study plan, are recognised, with resolution of the Board after evaluation of the documentation produced by the student. After having approved the recognition of a defined number of credits, the Board arranges for the regular enrollment of the Student in the relevant year of the course, adopting the criterion of compliance with the preparatory exams. Enrollment in a specific year of the course is in any case subject to the availability of places within the programmed number, as indicated by the Transfer Regulations in force.Nell'ambito del C.I. Abilità informatiche linguistiche e professionali**:**

1. Eligibility for the English exam is recognized to students who have obtained an English language certification of at least B2 level.

2. Eligibility for the IT exam is recognized to students who have obtained an IT certification which will be assessed by the Study Program Board.The attendance of free courses is not foreseen, nor is the recognition of credits from single courses.

Art. 6 - Opportunities offered during the training course

The student of the Medicine and Surgery study course can participate in the international mobility programs to which the University of Bari adheres, such as the Erasmus+ and Erasmus+ Traineeship program or the Global Thesis programme.

Disabled and DSA students are guaranteed, through the activation of specific services, the protection and support of the right to study and full inclusion in university life, in compliance with

law 17/99 which supplements the previous law 104/92 and law 170/2010. The office for services for disabled students and DSA is available to students to provide specific and/or individual services, as well as any study aids.
For problems concerning students with SEN, the Interdisciplinary Department of Medicine has identified a contact teacher; all the information for accessing the specific services can be consulted at the following link:https://www.uniba.it/it/studenti/servizi-per-disabili/servizi-per-disabili

Art. 7 - Final exam and achievement of the title

The final exam of the degree must constitute an important individual training opportunity to complete the course. To access the final exam, the student must have successfully passed all the exams required and the other forms of assessment required by the study plan within 10 days before the scheduled date for the graduation session. To obtain the degree, the presentation of a thesis elaborated by the student in an original way under the guidance of a supervisor is required.
The student has the availability of 18 credits (450 hours) aimed at preparing the degree thesis at university facilities. This student activity is defined as a "degree internship": it must take place outside the other official teaching activities and must not overlap with those chosen by the student (ADE). The student who intends to carry out the degree internship in a specific structure must present a formal request to the Director of the same Department accompanied by his curriculum (list of exams taken and marks obtained in each of them, list of optional activities followed, internships in laboratories or clinics or any other activity carried out for training purposes). The Director of the Department, after verifying the availability of places, accepts the request and entrusts a tutor, possibly indicated by the student, with the responsibility of checking and certifying the activities carried out by the student in the structure.
The graduation exam focuses on the discussion of a thesis prepared by the candidate.
The degree mark, expressed out of one hundred and ten, is determined by the following parameters:

a) The weighted average of the marks obtained in the curricular exams, expressed in one hundred and tenths. Before converting to 110/100, 2 exams indicated by the student will be subtracted from the sum of the marks obtained in the exams.i punti attribuiti dalla

b) Graduation Commission during the discussion of the thesis, obtained by adding the scores attributed individually by the commissioners up to a maximum of 9 points:

• Type of research (experimental study; case study presentation; case report; compilation study): maximum score 6 points;

• Presentation quality: maximum score 1 point;

• Mastery of the topic: maximum score 1 point;

• Discussion skills: maximum score 1 point.

the points awarded for the duration of the course (in progress/out of course): maximum score 2 points;

c) points for honors obtained in exams (at least 2/5 honors): maximum score 2 points; points for involvement in the Erasmus Program (Erasmus+ studio, Erasmus+ Traineeship) and Global Thesis with a minimum duration of 2 months: maximum score 1 point cannot be combined between the various experiences.i punti per coinvolgimento nell'esperienza Visiting/Free Movers: punteggio massimo 0,5 punti non cumulabile con altri programmi di scambio internazionale
d) Summary table for determining the degree mark

Research typology	• Experimental study **6 PUNTI;** • Case presentation **4 PUNTI;** • Case Report **2 PUNTI;** • Compilation study **1 PUNTO**
In progress	• 1° session within the summer session (first useful session) **2 PUNTI;** • 2° session within the autumn session (academic year in progress) **2 PUNTI;** • 3° session within the winter session (recovery) **1 PUNTO**
Lodi number	• >= 5 **2 PUNTI;** • >= 2 **1 PUNTO**
Erasmus Experience/Global Thesis)	• **1 PUNTO** (cannot be combined with other international exchange programmes)
Erasmus Experience/Global Thesis)	• **0,5 PUNTI** (cannot be combined with other international exchange programmes)

The overall mark, determined by the sum of the scores foreseen by the items "a - e" is rounded up or down to the nearest whole number.
Honors can be awarded with the unanimous opinion of the Commission to candidates who obtain a final score >= 113.

7.1 - Anticipation of the graduation session.

To be admitted to take the degree exam before completing the 2nd semester of the sixth year, in the March and/or April session, the student must:
1. Pass all the exams, including the practical-enabling internship within 10 days of the corresponding graduation session, provided that the sixth year exams are registered in the first semester and that the students pay the full amount of the tuition fees university related to the sixth year of the course, as required by the Central Administration;
2. Having obtained an entrance grade to the graduation session, certified by the competent U.O. Medicine and Surgery - Student Secretariat, with a minimum of 104, a prerequisite for the assignment of the final grade of 110/110 cum laude.

In the specific case of anticipating the graduation exam in the March and/or April session, the student will be allowed to attend the practical-assessment internship at least 3 months before the graduation session.

Art. 8 - Quality Assurance

The Statute of the University of Bari Aldo Moro has attributed to the Presidium of Quality of the University (PQA) the functions relating to the Quality Assurance (AQ) procedures, to promote and improve the quality of teaching, research and third mission and all the other functions attributed by law, by the Articles of Association and by the Regulations. The QA process is transparent and shared with the entire university community and external stakeholders through the publication of the useful documentation produced by the PQA, visible at the link https://www.uniba.it/ateneo/presidio-qualita.

The Study Program Board annually submits its teaching and organizational activity to a self-assessment process aimed at identifying corrective and improvement actions through the conscious involvement of the responsible bodies. In particular it takes into consideration:• l'efficienza organizzativa dei Corsi di Laurea ad esso afferenti e delle strutture didattiche utilizzate

- the quality and quantity of services available to students
- ease of access to information relating to all training activities
- compliance by teachers and students with the regulations and with the resolutions of the Degree Program Board
- the quality of teaching monitored through evaluation questionnaires filled in by teachers and students
- the use of IT and multimedia aids, ease of access to paper and electronic bibliographic sources, the availability of multimedia laboratories
- the organization of the professional internship
- teaching productivity determined on the basis of the number of exams passed and the duration of the school career.

L'autovalutazione è svolta da una Commissione, di cui non fanno parte il Responsabile del Corso di Degree and Year Coordinators, appointed by the Class/Interclass Council and composed of:

- a coordinator chosen from among the tenured professors in the Degree Course
- three professors who teach in the Degree Course, two of which are tenured professors and/or university researchers
- three undergraduate students.

The Commissions annually examine the data relating to the monitoring of teaching activities reported in the Review Form.

Furthermore, the Coordinator of the Study Course in Medicine and Surgery, in order to facilitate the meeting between the demand for skills required by the labor market and the request for training required by students, organizes consultations with the main representative organizations of the medical profession.

Any reports from students or teachers relating to disservices can be communicated to the Study Program Coordinator who will examine them together with the U.O. Teaching of the Interdisciplinary Department of Medicine; where necessary, they are brought to the attention of the Study Program Board.

Art. 9 – Final rules

This Regulation is applied starting from the a.y. 2023/24 and remains in force for the entire cohort of studies.

For anything not expressly provided for in these Regulations, please refer to the Statute, the University Teaching Regulations and current legislation, as well as the University provisions.