

DIDACTIC REGULATION OF THE SINGLE-CYCLE MASTER'S DEGREE IN MEDICINE AND SURGERY

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DIDACTIC REGULATIONS OF THE SINGLE-CYCLE MASTER'S DEGREE COURSE IN MEDICINE AND SURGERY

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2
3
13
13
13
13
14
14
14
15
15
16
16
16
17
17

Attached: Study Plan



The Regulation covers the organizational aspects of the didactic of the Degree Course in Medicine and Surgery.

The Master's Degree Course in Medicine and Surgery (MDCMS) is divided into six years and belongs to the LM 41 class "Class of Master's Degrees in Medicine and Surgery".

The didactic structure pertaining the Degree Course is the Departmental Faculty of Medicine and Surgery.

Article 2 Educational Objectives

Graduates in master's degree courses in Medicine and Surgery will have to be endowed with:

- scientific basis, both theoretical and practical preparation required as defined by Directive 75/363/CEE for the practice of medical profession, culture and methodology necessary to the implementation of the permanent training, as well as a level of professional, decisional and operational autonomy consequent to a learning process defined by a holistic approach to medical problems of both healthy and ill people also in relation to their surrounding chemical-physical, biological and social environment.
- essential theoretical knowledge gained from fundamental sciences, within the perspective of their successive professional implementation; with the ability to judgementally recognize and evaluate from a clinical point of view, and in a unitary vision, extended also to the socio-cultural and gender-related issues, information about health and disease condition of the single individual, interpreting it in the light of basic scientific knowledge, pathophysiology and pathologies of organ and apparatus; with the ability and experience, combined with the capacity for self-assessment, to responsibly address and resolve the priority health issues from a precautionary, diagnostic, prognostic, therapeutic and rehabilitative point of view; with the knowledge of historical, epistemological and ethical dimensions of medicine; with the ability of communicating clearly and humanely with the patient and their relatives; with the ability to cooperate with the various professional figures in the several healthcare group activities; with the ability to identify the community's medical issues and to intervene competently.

The professional profile of graduates in master's degrees will have to include the knowledge of:

- fundamental notions and methodology of physics and statistics useful for the identification, comprehension and interpretation of biomedical phenomena; fundamental biological organization and biochemical and cellular basic processes of living organisms; basic processes of individual and group behaviors; mechanisms of transmission and of genetic information expression at the cellular and molecular levels;
- structural organization of the human body, with its principal anatomical and clinical applications, from the macroscopic to the microscopic level up to the principal ultrastructural aspects and the mechanisms through which such organization carries itself out during the embryonic development and differentiation; essential morphological features of systems, apparatus, organs, tissues, cells and subcellular structures of the human organism, along with their main morpho-functional counterpart;
- biochemical, molecular and cellular mechanisms at the basis of the pathophysiological processes; foundation of principal laboratory methods applicable to the qualitative and quantitative study of the pathogenetics determinants and of the significant biological processes in medicine;
- operating procedures of the various organs of the human body, their dynamic integration in



apparatus and the general mechanisms of functional control in normal conditions;

- principal functional findings in the healthy person;
- fundamentals of the main methodologies of diagnostic by imaging and of radiation uses, principles of application of biomedical technologies to medicine.

By the end of the degree course, graduates will have to be endowed with:

- knowledge of the organization, structure and normal functioning of the human body, for the purposes of maintaining the health condition of the person and of the comprehension of the pathological changes;
- knowledge of the causes of diseases in humans, interpreting their fundamental pathogenetic molecular, cellular and pathophysiologic mechanisms;
- knowledge of fundamental biological defense mechanisms and the pathological ones in the immune system and the knowledge of the relationship between microorganisms and hosts in human infections, as well as the related defense mechanisms;
- the ability to correctly adopt the appropriate methodologies to detect the clinical, functional and laboratory findings, critically interpreting them also under the physiopathological aspect, for the purposes of diagnosis and prognosis, and the competence to evaluate the cost-benefit ratio during the selection of the diagnostic procedures, paying attention to the needs of both the correct clinical methodology and the principles of medicine based on evidence;
- an appropriate systematic knowledge of the most relevant diseases of the various apparatus, under the nosographical, etiopathogenetical, physiopathological and clinical profile, as part of a unitary and global vision of human pathology, and the ability to critically evaluate and correlate the clinical symptoms, physical clues, functional alterations observed in humans with anatomopathological injuries, interpreting their production mechanisms and investigating their clinical significance;
- the skill of clinical reasoning apt to analyze and resolve the most common and relevant medical issues of both medical and surgical interest, and the ability to evaluate the epidemiological data and to know their use to promote health and prevent diseases among individuals and the community;
- knowledge of the principles on which the analysis of the individual's behavior is based and an adequate expertise, gained from extensive and continuative interactive training experiences in the field of doctor-patient relation and communication, having in mind the importance, quality and the adequacy of communication with the patient and his relatives, as well as with the healthcare professionals, the awareness of his own and others' values as well as the ability to appropriately adopt the methodologies oriented towards medical information, education and training, and the competence to recognize the main alterations in behavior and in subjective experiences, pointing at preventive and rehabilitative therapeutic approaches;
- knowledge of anatomopathological frames as well as of cellular, tissue and organ trauma and their evolution in relation to the most relevant diseases of each apparatus, and knowledge, gained also from attendance to anatomo-clinical conferences, of the contribution of the anatomopathologist to the decisional clinical process, with reference to the use of the histopathological and cytopathological diagnostics (including the colpo- and onco-cytopathological one) also through bio-molecular techniques, in the individual's disease diagnosis, prevention, prognosis and therapy, as well as the ability to interpret the anatomopathological reports;
- the ability to propose, precisely, the various imaging diagnostics procedures, assessing risks, costs and benefits, and the ability to interpret the imaging diagnostics reports, as well as the knowledge of recommendations and methodologies for the use of radioactive tracers, moreover the ability to precisely propose the therapeutic use of radiations, assessing risks and benefits, and the knowledge of the principles of radiation protection;



- knowledge of the main and most recent methodologies of laboratory diagnostics for clinical, cellular and molecular pathology, as well as the ability to propose, correctly, the various laboratory diagnostics procedures, assessing costs and benefits, and the skill to rationally interpret the laboratory data;
- knowledge of physiopathological, anatomopathological, preventive and clinical issues regarding the bronco-pneumological, cardio-vascular, gastro-enterological, haematopoietic, endocrine and metabolical, immunological and uro-nephrological systems, providing the eziopathogenetical interpretation and suggesting the diagnostic and therapeutic approaches, and identifying the conditions that, in the abovementioned fields, require the professional contribution of the specialist;
- the ability to recognize the most frequent otolaryngological, odontostomatological diseases and those of the oral cavity, of the locomotor and visual system, skin and venereal diseases, suggesting the main prevention, diagnostic and therapeutic approaches, and the ability to identify the conditions that, in the abovementioned fields, require the professional contribution of the specialist;
- the ability to identify, through the physiopathological, anatomopathological and clinical study, the main alterations of the nervous system, the psychiatric pathologies and those related to the social environment, providing an etiopathogenetic interpretation and the diagnostic and therapeutic approaches;
- the skill and sensitivity to see specific issues into a broader vision of the general health condition of the person and his general needs of well-being, and the ability to integrate, in a global and unitary evaluation of the individual's overall health condition, structural and functional symptoms, signs and alterations of the various organs and apparatus, gathering them under the preventive, diagnostic, therapeutic and rehabilitative profile;
- knowledge of the physiological modifications of ageing and of illness problems in old people, and the competence in planning medical actions and medical assistance in geriatric patients;
- the ability to analyze and solve clinical issues of internal, surgical and specialized nature, assessing benefits, risks and costs in view of the principles of medicine based on evidence and of the diagnostic-therapeutic suitability;
- the capacity to analyze and solve clinical issues of oncological nature, undertaking the diagnostictherapeutic process in view of the principles of medicine based on evidence, as well as knowledge of pain therapy and palliative care;
- the capacity and perspicacity to apply, in medical decisions, the main principles of health economics with regard to the cost-benefit ratio of diagnostic and therapeutic procedures, of the hospitalregion therapeutic continuity and of organizational appropriateness;
- knowledge of human sciences' fundamental concepts regarding the historical evolution of medicine's values, including epistemological and ethical values;
- the ability and sensibility to critically evaluate medical actions in the healthcare team;
- knowledge of the various classes of pharmaceutical products, of their operating molecular and cellular mechanisms, of pharmacodynamic and pharmacokinetic's fundamental principles, and knowledge of products' therapeutic uses, variability of response in relation to gender-related, genetical and physiopathological factors, of pharmacological interactions and definition criteria of therapeutic schemes, as well as knowledge of principles and methods of clinical pharmacology, including pharmacovigilance and pharmacoepidemiology, of collateral effects and toxicity of pharmaceutical products and drugs;
- knowledge of medicine of gender and of psychological issues;
- knowledge, in terms of prevention, diagnostics and rehabilitation, of issues related to the health



and illness in the neonatal period, childhood and adolescence, as far as the general practitioner is concerned, and the ability to identify conditions requiring the professional contribution of the specialist, and to plan fundamental medical interventions with regards to the main health issues, by frequency and by risk, regarding the specialized pediatric pathology;

- knowledge of physiopathological, psychological and clinical issues regarding female fertility and sexuality and their dysfunctions from a sexological medical point of view, the natural and medically assisted reproduction from an endocrine-gynaecological point of view, the pregnancy, prenatal morbidity and the birth, the capacity to identify the most frequent forms of gynaecological pathologies, pointing at the fundamental preventive and therapeutic measures, and identifying conditions requiring the professional contribution of the specialist;
- knowledge of pathophysiological, psychological and clinical issues regarding male fertility and the evaluation of male gametes, male sexuality and their dysfunctions from a sexological medical point of view, the natural and medically assisted reproduction from an endocrine-andrological point of view, the capacity to identify the most frequent forms of andrological pathologies, providing fundamental preventive and therapeutic measures, and identifying conditions requiring the professional contribution of the specialist;
- the capacity to identify, in the immediacy of the event, emergency and urgency clinical situation, putting into action the necessary first aid actions, in order to ensure survival and the best assistance possible, and the knowledge of methods of interventions during catastrophic events;
- knowledge of fundamental rules to preserve and promote the health of the individual and of the community, and the knowledge of norms and practices necessary to maintain and promote health in workplaces, identifying situations of specialized competence, as well as knowledge of the fundamental legislation ruling health organization, and the ability to provide principles and application of preventive medicine in the diversified and articulated communities;
- knowledge of the code of professional conduct and of the code connected to high professional liability, critically evaluating the ethical principles underlying the different professional choices, and the ability to develop an interdisciplinary and transcultural mental approach also and especially in collaboration with other professional figures of the healthcare team, deepening the knowledge of rules and dynamics distinguishing the team work as well as an adequate experience in the general organization of the work, connected with a sensibility to its characteristics, to bioethics and history and epistemology of medicine, to the relationship with the patient, as well as to the topics of community medicine, gained also through direct experience on field;
- knowledge of distinguishing characteristics of multiethnic society, with specific regards towards variety and diversification of value and cultural aspects;
- a deep knowledge of technological and biotechnological development of modern bio-medicin, including knowledge of the principles of scientific research in the biomedical field and in the clinical-specialized areas, ability to research, read and interpret international literature in order to plan research on specific themes and to develop a critical interpretation of scientific data mindset;
- an adequate experience in the independent study and in the organization of their own permanent education and training, and the capacity to carry out bibliographical and update research, the ability to critically read scientific articles resulting from the knowledge of scientific English, which enables them to comprehend international literature and stay up-to-date;
- IT competence useful for the management of services' information systems, and for their own self-training;
- an appropriate knowledge of the family and region medicine, gained also through practical training experiences on the field.



In particular, special expertise in the fields of internal medicine, general surgery, pediatrics, obstetrics and gynaecology, as well as medical-surgical expertise, gained by performing professionalizing training for a period not shorter than 60 CFUs to be carried out in conjunction with other educational activities of the degree course in university healthcare facilities.

Qualifying characteristics of the doctor who will be shaped include:

- 1. Aptitude to human contact (communication skills).
- 2. Ability to self-learn and self-evaluate (continuing education).
- 3. Ability to analyze and solve in complete autonomy problems connected to the medical practice, along with a good clinical practice based on scientific evidence (evidence based medicine).
- 4. Be used to the continuous updating of knowledge and abilities, and possession of the methodological and cultural basis for the autonomous acquisition and the critical evaluation of new knowledge and abilities (continuing professional development).
- 5. Good interdisciplinary and interprofessional work practice(interprofessional education).
- 6. Deep knowledge of methodological fundamentals for a correct approach to scientific research in the medical field, along with the autonomous use of information technologies.

Keywords of the adopted didactic method, useful for reaching the expected qualifying characteristics, require the horizontal and vertical integration of knowledge, a teaching method based on a solid cultural and methodological basis achieved through the study of pre-clinical subjects and later on mainly focused on the ability to address issues (problem oriented learning), early contact with the patient, a significant acquisition of clinical skills along with a significant acquisition of the ability to human relationship.

Therefore, it has been planned a highly integrated, flexible and modifiable didactic organization, a genuine laboratory of scientific experimentation, with the aim of promoting among the students the ability to gain knowledge not in a fragmented, but in an integrated way, and to maintain it non only in the short, but also in the long term. The student is thus considered the pivot of the learning process, both in the didactic planning and in the improvement of the whole curriculum, in order to enhance autonomous actions.

A solid basis of clinical knowledge is furthermore guaranteed to the student through the organization of certified clinical practices based on mentoring didactics, along with a strong comprehension of the medicalscientific and human sciences' method. In our opinion, a true professional competence is reached only after a prolonged custom of contact with the patient, promoted since the first year of the course and integrated with clinical and basic sciences, along the whole educational path through an extensive use of tutoring activities.

In the didactic project of the Master's Degree Course it is proposed the proper equilibrium of integration between:

- 1. basic sciences, which must be wide and provide knowledge of evolutionary biology and of the biological complexity aimed at the knowledge of structure and function of the human organism in normal conditions, for the purposes of maintaining the health conditions,
- 2. clinical and methodological medical practice, which must be remarkably robust, through an extensive use of mentoring didactics able to transform theoretical knowledge into personal experience and to build their own rank of value and interests,
- 3. human sciences, which must be a useful suitcase for reaching the awareness of being a medic.

The peculiar characteristics of the Degree Course in Medicine and Surgery aimed at the achievement of the



specific objectives are summarized as follows:

- 1. In accordance with the current legislation, the planning of the objectives, programmes and teaching is multidisciplinary.
- 2. The implemented teaching method is interactive and multidisciplinary, with the daily integration of basic sciences and clinical subjects as well as an early clinical involvement of the students, which are right away oriented to a correct approach with the patient.
- 3. Selection of specific objectives in the foundation courses, based primarily on the significance of each objective in the frame of human biology, and on the propaedeutics towards current or predictable clinical topics, with a focus on the component regarding scientific methodology.
- 4. Selection of specific qualifying courses' objectives based primarily on epidemiological prevalence, urgency for intervention, possibility of intervention, gravity and didactic exemplarity. It is furthermore planned the promotion of the frequency in hospital departments and clinics of regional facilities, and the promotion of the relationship with the patient, also under the psychological aspect.
- 5. The teaching process benefits, enhancing their use, from modern didactic instruments, made up by the tutorial system, clinical trigger, problem oriented learning, experiencial learning, problem solving, decision making and extended use of seminars and conferences.
- 6. Professors who act also as tutors are mostly those who have a role in the educational iter of the student with teaching functions (area tutors) and students support functions (personal tutors).
- 7. Particular attention is put on the acquisition of practical skills, through:
 - a. involvement in the planning of basic research during the first 3 years of the course,
 - b. learning of the semiotic basis of clinical sciences at the bed of the patient and in laboratories in the interim period (professionalizing clinical practice organized as tutored guided activities with certification of the ability level),
 - c. frequency of university and regional corridors and clinics (clinical clerkship, with certification of the gained abilities from the tutor), as those of general practitioners, for the completion of the clinical practice in the last years of the course and the clinical practice period aimed at the preparation of the dissertation,
 - d. attendance to research programmes during the clinical practice period aimed at the preparation of the dissertation.
- 8. Particular attention is given to the learning of English and Italian language (please note that most of the students come from developing countries), while knowledge of English language is considered a prerequisite.
- 9. Particular attention is given to information and multimedia methodologies also through e-learning, teledidactics and telemedicine experiences, and to the correct use of bibliographical sources.
- 10. Students' assessment takes also place through midterm tests (self-evaluation tests and interim interviews), written relations from students on assigned topics, and through the evaluation of the overall profile developed according to predefined criteria. Exams can also be organized other than the traditional oral or written forms into a sequence of items useful for testing the gained knowledge (knows and knows how), e.g. multiple-choice tests or short written answers based on issues or clinical cases of interdisciplinary nature, followed by exams relevant for verifying gained clinical skills, e.g. Objective Structured Clinical Examination (shows how) or mini-Clinical Evaluation Exercise, Direct Observation of Procedural Skills and the use of Portfolio (does). As a general rule, valid for all integrated courses, formal evaluations will be based on written exams possibly followed by oral exams. For the students' evaluation, to adhere to the national-scale experimentation, it is implemented the Maastricht-type Progress Test, in order to assess the actual gained knowledge.



Expected learning outcomes, expressed through "European descriptors for the degree course"

Knowledge and understanding

Graduates must prove such knowledge and understanding capable to allow them to develop and/or implement original ideas, in the context of biomedical and translational research. The following learning objectives must be acquired:

Scientific Basis of Medicine

- 1. Knowledge of normal structure and functionality of the organism as a complex of biological system in constant adaptation.
- 2. Ability to interpret morpho-functional anomalies of the organism occurring in the different diseases.
- 3. Capacity to discern normal and abnormal human behavior.
- 4. Knowledge of crucial and principal risk factors for health and disease, and of the interaction between man and its physical and social environment.
- 5. Knowledge of molecular, cellular, biochemical and physiological mechanisms that maintain the organism's homeostasis.
- 6. Knowledge of human life-cycle and the effects of growth, development and ageing on the individual, the family and the community.
- 7. Knowledge of etiology and natural history of acute and chronic diseases.
- 8. Knowledge of epidemiology, health economics and the basis in the health management.
- 9. Knowledge of principles of drug action and their uses, and the effectiveness of the different drug therapies.
- **10.** Knowledge and ability to implement the main biochemical, pharmaceutical, surgical, psychological, social -and of any other kind- principles in acute and chronic diseases, in the rehabilitation and in terminal treatments.

Ability to apply knowledge and comprehension

Graduates must be capable of applying their knowledge, have the ability to comprehend and solve problems about new or unfamiliar topics, placed in wide and interdisciplinary contexts, related to the achievement of outstanding clinical capacities appropriate to the complexity of the population's care and health. The following teaching objectives must be acquired:

Clinical Skills

- 1. Ability to correctly create an adequate clinical history, including social aspects, e.g. occupational health.
- 2. Ability to carry out an evaluation of the physical and mental condition.
- 3. Ability to follow basic diagnostic and technical procedures, to analyze and interpret the results, in order to correctly identify the nature of a problem.
- 4. Ability to correctly implement the appropriate diagnostic and therapeutic strategies, for the purposes of safeguarding life, and capacity to implement the principles of medicine based on evidence.
- 5. Capacity to exercise the right clinic judgement to establish diagnosis and therapies in the single patient.
- 6. Recognize every condition endangering the life of the patient.
- 7. Ability to correctly and autonomously manage common medical urgencies.



- 8. Ability to manage patients effectively, efficiently and ethically, promoting health and preventing diseases.
- 9. Ability to correctly evaluate health issues and to advise the patients considering physical, psychic, social and cultural factors.
- 10. Knowledge of the proper deployment of human resources, diagnostic interventions, therapeutic procedures and technologies dedicated to healthcare.

Populations' Health and Healthcare Systems

- 1. Knowledge of the principal crucial factors in health and diseases, such as lifestyle, genetic, demographic, environmental, socio-economic, psychological and cultural factors in the population.
- 2. Awareness of the important role of the determinants of health and disease, and ability to take the necessary preventive and protective actions against diseases, injuries and accidents, maintaining and promoting health in the individual, in the family and in the community.
- 3. Knowledge of the international health condition, of the global tendencies of morbidity and mortality by chronic diseases from a social point of view, the impact of migrations, trade and environmental factors on health, and the role of international healthcare organizations.
- 4. Awareness of roles and responsibilities of other healthcare professionals in providing health treatments to individual, populations and communities.
- 5. Gain an understanding of the necessity of a collective responsibility in the intervention for healthcare promotion which needs a close cooperation with the population, and a multidisciplinary approach which involves the healthcare professionals and a cross-sectoral cooperation.
- 6. Knowledge of the basic organization of the healthcare systems, including politics, organization, funding, restrictive measures on costs and efficient management principles of the proper healthcare provision.
- 7. Exhibit a good comprehension of the mechanisms at the base of equity in the access to healthcare, effectiveness and quality of treatments.
- 8. Be able to correctly use local, regional and national, demographic and epidemiological surveillance data in healthcare decisions.
- 9. Knowledge of the basis in order to make sound decisions, when necessary, regarding issues related to healthcare treatments.

Autonomy of judgement (Making judgements)

Graduates must be able to integrate knowledge and manage complexity, as well as to make judgements based on limited or incomplete information, including consideration on social and ethical responsibilities linked to the implementation of their knowledge and judgements. The following learning objectives must be acquired:

Critical Thinking and Scientific Research

- 1. Exhibit a critical approach, a constructive criticism, creativity and a research-oriented attitude, during the conduct of professional activities.
- 2. Understand the importance and the limitations of scientific thinking based on information obtained from different sources, in order to determine the cause, the treatment and the prevention of the disease.
- 3. Be able to make personal judgements to solve analytical and critical problems ("problem solving") and ability to independently research scientific information, rather than waiting for others to give them the information.



- 4. Identify, formulate and solve patient's problems using the basis of scientific thinking and research, and on the basis of the information obtained and supported by different sources.
- 5. Awareness of the role that complexity, uncertainty and probability plays in the decision made during the medical practice.
- 6. Be able to make assumptions, critically collect and evaluate data in order to solve problems.

Professional Values, Abilities, Behavior and Ethics

- 1. Ability to identify essential features of the medical profession, including moral and ethical principles and the legal responsibilities at the basis of the profession.
- 2. Acquire professional values such as excellence, altruism, responsibility, compassion, empathy, reliability, honesty and integrity, and the commitment to follow scientific methods.
- 3. Knowing that every doctor has the committment to promote, protect and improve these elements for the benefit of the patients, of the profession and of the society.
- 4. Acknowledge that a good medical practice is strictly dependent on the interaction and on good relationships between the doctor, the patient and the family, to safeguard wellbeing, cultural diversity and autonomy of the patient.
- 5. Own the ability to properly apply the principles of moral reasoning and being able to take the right decision regarding possible conflicts between ethical, legal and professional values, including those emerging from economic hardship, commercialization of healthcare treatments and from new scientific discoveries.
- 6. Be fully aware of the need for continuous professional improvement along with the acknowledgement of their own limits, including those of their own medical knowledge.
- 7. Have respect for colleagues and other healthcare professionals, showing excellent ability to establish collaborative relationships with them.
- 8. Awareness of moral obligations in providing terminal medical treatments, including palliative treatment of symptoms and pain.
- 9. Know the moral and medical problems in the treatment of the patient's data, plagiarism, confidentiality and intellectual property.
- 10. Gain the capacity to effectively plan and efficiently manage their own time and activities to deal with conditions of uncertainty, and the ability to rapidly adapt to changes.
- 11. Gain a sense of personal responsibility in taking care of the single patients.

Communication Skills

Graduates must be able to communicate their findings clearly and without ambiguity, along with underlying knowledge and argument, to both specialized and non-specialized audience. The following learning objectives must be acquired:

Communication Skills

- 1. Carefully listen in order to understand and synthesize the relevant information on every issue, understanding their contents.
- 2. Implement communication skills in order to facilitate comprehension with patients and their relatives, enabling them to make decisions as equal partners.
- 3. Communicate efficiently with colleagues, with the Faculty, with the community, in other fields and with the media.
- 4. Interact with other professional figures involved in patients' treatment through an efficient team work.
- 5. Prove to have basic abilities and the right attitude in teaching others.



- 6. Exhibit a good sensibility towards cultural and personal factors that improve interactions with patients and with the community.
- 7. Communicate effectively both in oral and written form.
- 8. Ability to create and maintain good medical documentation.
- 9. Be able to summarize and present the appropriate information for the audience, and be able to discuss feasible and acceptable action plans that represent priorities for the individual and for the community.

Learning Skills

Graduates must have developed those learning skills enabling them to continue their study in a self-directed or independent manner. The following learning objectives must be acquired:

Information Management

- 1. Be able to correctly collect, organize and interpret medical and biomedical information from different sources and database available.
- 2. Ability to collect specific information about the patient from the clinical data management systems.
- 3. Be able to use information- and communication-related technology as a proper support for diagnostic, therapeutic and preventive practices and for the surveillance and monitoring of the healthcare level.
- 4. Ability to understand the applications and limitations of information technology.
- 5. Ability to manage a good archive of their own medical practice, for the purpose of its successive analysis and improvement.

In order to achieve its didactic objectives, the single-cycle master's degree in Medicine and Surgery requires 360 credits in total, divided into 6 years of course, of which at least 60 credits must be acquired through learning activities aimed at developing specific professional skills.

The exams, not more than 36, are scheduled during the periods of interruptions of the lectures.

Article 3 Professional Profiles and Opportunities

Graduates from Medical School will be able to practice in clinical, healthcare and biomedical working environments. Furthermore, the Master's Degree is a prerequisite for accessing the medical specialization schools.

The Degree Course in Medicine and Surgery prepares for the profession of "General Medical Practioner". The code of the profession's class according to ISTAT classification is 2.4.1, Category 2.4.1.1 and Professional Unit 2.4.1.1.0.

Article 4 Admission Requirements

The Degree Course has a limited number of places available, planned at national level (ex art. 1, comma 1, letter a) Law n. 264/1999) and the maximum number of those who can enroll in the first year of the course is defined annually by a specific Ministerial Decree. In order to enroll, candidates must sit for an admission test, which consists in multiple-choice questions about general knowledge, logical reasoning, chemistry,



physics, mathematics and biology, according to the ministerial didactic program of the secondary high school. The test is set annually by the Athenaeum according to the methods and timing determined by the competent bodies in compliance with the current legislation. Only the candidates in possession of a secondary High School Diploma or of another academic title obtained outside of Italy and recognized as equivalent in accordance with the current legislation may be admitted to the Degree Course. Candidates who rank successfully in the list of admitted students but do not demonstrate sufficient knowledge in chemistry, biology and physics, will be given additional educational duties (Obblighi Formativi Aggiuntivi, OFA) to be solved via make-up courses organized by the University. Students, therefore, are admitted with an additional educational duty only with respect to the subject/s in which they have a knowledge deficit and the solvency of the OFA will be certified by the Professor holding the course through a written or oral test issuing a specific qualifying evaluation, to be obtained before the first exam of the I year of the course.

The admission to the Degree Course requires also medical examinations, in accordance with the procedures stated by the current legislation, regarding the suitability for the specific professional profile.

Article 5 Didactic System

The Departmental Faculty of Medicine and Surgery defines the Didactic Regulation, in compliance with current legislation, providing for each Degree Course the classification of learning activities in basic, qualifying, related, elective ones, aimed towards the final dissertation. Each didactic activity refers to an education field that gather together different classes, to which the Scientific Disciplinary Sectors are related.

All the didactis programmes, as well as the lessons schedule, are available online on the UniCamillus website, <u>www.unicamillus.org</u>, in the DCs' dedicated page.

Article 6 ECTS

The unit of measurement for the work required by the student to accomplish every learning activity as referred to in the Didactic Regulation and to obtain the qualification is the academic credit called "Credito Formativo Universitario (CFU)".

The 360 CFUs are scheduled for the six years of the course, of which at least 60 are to be acquired during professionalizing educational activities.

Each CFU, equal to 25 hours of learning for the student, includes hours of frontal lessons, practice, laboratory, seminary and other educational activities requested by the Didactic Regulation, alongside with hours of individual study and personal committment required to complete the learning process in order to pass the exam, or to implement educational activities not directly subject to the academic didactics (dissertation, projects, clinical practice, linguistic and IT competences, ecc.). CFUs corresponding to each learning activity are acquired by the student at the passing of the exam or of any other form of examination. Grades are expressed on a scale of 30 and the final test on a scale of 110, possibly with a honor.

Professionalizing educational activities include participation to clinical practice, laboratory and practical activities carried out in facilities appropriate for dimensions and technical features, in relation to the scheduled activity and to the number of students.



Article 7 Typology of Educational Activities

The Degree Course can make use of the following types of learning activities:

• Frontal lessons: discussion of a specific topic identified by a title, held by one or more professors in the classroom and addressed to all students;

• Seminars: presentation in the classroom of clinical cases/case reports prepared by the students thanks to their professors' tutoring;

• Practical activities: practical laboratories to develop technical skills, also at an advanced level, through simulations in the didactic laboratories.

• Professionalizing clinical practice: direct assistance to patients in a highly complex and multidisciplinary clinical-welfare entity under the direct supervision of tutors.

Article 8 Clinical Practice

The structure and organization of professionalizing activities are administered by the Didactic Director who arranges a detailed plan for their implementation.

Clinical practice activities are held under the direction and responsibility of Tutors.

Clinical practice is the irreplaceable modality for the acquisition of professional skills, through practical experimentation and integration of the theoretical-scientific knowledge with professional and organizational operating practice.

Clinical practice participation - mandatory and non-replaceable - is certified by the Tutor, who assesses and documents in the dedicated evaluation form the levels of skills gradually achieved by the student.

For each student, the Didactic Director monitors the performing of the total number of hours of programmed clinical practice. At the end of each year of the degree course, the student must take the annual clinical practice exam. Such exam is evaluated on a scale of 30.

The activities that the student performs during the clinical practice must not and cannot be considered as a replacement of staff's working hours.

Article 9 Elective Courses

The Professors' Committee set the offer of elective courses, doable as frontal lessons, seminars, interactive courses in small groups, until the achievement of a total number of 8 CFUs.

The calendar of activities is published before the beginning of each academic year, or, in any case, before each didactic term, along with the calendar of mandatory didactic activities.

Elective didactics are considered as Professors' official activities and thus are recorded in the lectures' register.



The evaluation of these activities is taken into account for the attribution of the grade in the final exam.

Article 10 Enrolment to Single Courses

For the purposes of professional updating, curricular integration and cultural enrichment, it is possible to enrol to a single course offered in the Bachelor's, Master's or single-cycle Master's Degree Programmes, without having to be enrolled in the course itself, taking the relative exam and receiving a formal certificate. Participation to a single course is allowed to students:

- a. enrolled in foreign universities, upon verification and approval of consular authorities;
- b. enrolled in other Italian Universities, upon approval of the Alma Mater and upon enforcement of appropriate agreements;
- c. graduated, therefore in possession of academic qualification required for admission to a Bachelor's or single-cycle Master's degree course of the Athenaeum;
- d. graduated who are not in possession of the necessary curricular requirements for admission to a Master's degree course, for the purpose of reaching such requirements as requested by the competent commission of the course itself.

Students who are enrolled in a Bachelor's, Master's and/or single-cycle Master's degree, training course, active internship, master, PhD or specialization courses of the Athenaeum are not allowed to enrol also in single courses.

The Board of Directors, upon proposal of the Rector, annually establishes the list of accessible single courses, the maximum number of acquirable CFUs, admission deadlines and amounts of enrollment fees. The exam of the single course must be taken within 12 months from the end of the semester.

Article 11 Academic Calendar and Compulsory Attendance

The student must attend the didactic activities scheduled in the study plan. The calendar is planned in response to the organizational needs of the University which evaluates its overall requirements. The schedule cannot be modified upon request of a single student, for any reason (health, religion, other). In order to be admitted to sit for the exams, the student must have attended at least the 75% of the hours of the didactic activities planned for every integrated course. The student who does not reach the 75% threshold of attendance is not admitted to the exam. The margin of tolerance of 25% is aimed at covering, in addition to absences due to force majeure or to any other cause, all the individual needs of the students, included the religious festivities that might occur within the lessons' calendar, provided that the University is open to young people of any faith and believes that they must have the opportunity to freely profess it, obviously having regard to the limits of compatibility with the unavoidable requirement of attending at least $\frac{34}{4}$ of the scheduled classes.

Attendance is verified by professors thanks to the checking methods established by the Athenaeum.

Professors, at the end of each didactic term, shall communicate, even in an electronic format, to the competent offices of the Secretariat, the names of the students whose attendance is missing. Should this communication not be submitted, the student will be considered to have fulfilled the mandatory attendance.



The student enrolled in Bachelor's and Master's degree Courses, in addition to lessons intended for the achievement of the academic title, can enrol, for each academic year, to a maximum of 2 courses from other degree courses of the Athenaeum. Such exams do not contribute to the acquirement of CFUs required for the achievement of the academic title and do not concur to the average academic record, but are only added to the student's career.

Students enrolled in degree courses can take exams ex art. 6 scheduled for single-cycle Master's degree courses, which are not scheduled for years of the course following the one in which the student is enrolled in.

Exams ex art. 6 of R.D. n. 1269/38 must be taken in compliance with the rules laid down for each Degree courses, therefore students - before submitting the application - must check the Didactic Regulation of their course and the one of the course where is held the class of the exams that is meant to sit for.

The application to be allowed to attend the course must be submitted before the beginning of course itself.

Article 13 Exams

The total number of exams cannot exceed the number of the official courses established by the Regulation and anyway cannot be more than 36 during the 6 years of the course. The DC is divided into two semesters. Usually there are:

• 2 ordinary exam sessions (winter and summer session):

• 2 recovery exam sessions (extraordinary September session and extraordinary January session). Participation in extraordinary exam sessions is allowed only to students enrolled in the academic years subsequent to the one in which the teaching was held, as long as they are up to date with the relative payments of fees and contributions.

In order to take the exams and other tests which demonstrate the learning results, the student must be up to date with the payment of taxes and contributions, must have passed possible preparatory exams and must be in possession of all the certificates of attendance.

Exams are set by the professors before the beginning of the Course and the related methods are communicated to the students.

The student who fails an exam can sit for it at the next date, even in the same session, provided that at least two weeks have passed since the failed exam.

In order to pass the exam, the student must reach at minimum 18/30.

Article 14 Autonomous Learning

The Teaching Body allows students to devote themselves to autonomous study, completely free from didactic activities and heading to:

• the use, individually or in small groups, autonomously or upon recommendation of Professors, of teaching support material made available by the Degree Course in order to promote self-learning and self-assessment, in order to achieve the set learning objectives. The teaching support materials (textbooks, simulators, dummies, audiovisual, computer programmes, ecc) will be placed, within reason, in areas



managed by the Athenaeum's staff.

- internship in university facilities chosen by the student, in order to achieve particular educational objectives.
- personal study, for exam preparation.

Article 15 Final Exam and Achievement of the Academic Degree

The Graduation Exam consists in the presentation of a thesis drafted in original by the student under the guidance of a supervisor; there might be a co-supervisor. 18 CFUs are attributed with the final exam. The dissertation may be drafted either in Italian or English.

To be allowed to sit for the Graduation Exam, the Student must:

- have attended all Courses and passed all exams;
- have acquired all the CFUs provided for in the Regulation for the activities other than the final exam;
- have submitted to the Registrar's Office:

1) application for the final exam addressed to the Rector, at least 15 days before the Graduation Session

2) a copy of the dissertation at least 10 days before the Graduation Session

The Graduation Exam will take place in the periods stated in the didactic calendar.

The following parameters contribute to the determination of the Graduation mark, expressed on a scale of 110:

1) arithmetical average of the grades obtained in the exams scheduled in the study plan, expressed on a scale of 110. Each honor counts for 0,33 points;

2) the points given by the Graduation Committee during the dissertation, for a maximum of 9 points.

The honor can be given to candidates who reach the final score equal to or higher than 110 and after unanimous decision of Committee.

Article 16 Loss of the Student Status

The loss of the student status will occur for the student who has not passed exams for 8 consecutive academic years or who interrupts or suspends his studies for a period of time longer than 8 academic years. The disqualified student can, after having passed again the admission test, enrol to the single-cycle Master's degree course in Medicine and Surgery. For this purpose, the Committee entitled to credits' recognition, upon request of the interested student, will validate the credits acquired during the previous academic cycle, after checking their non-obsolescence.

In addition, it is not allowed the enrolment as out-of-course student for more than 4 academic years; after such period, the enrolled student will be disqualified. Consequently, the student cannot exceed 10 academic years for the achievement of the degree title. The loss of the student status does not concern students who have passed all the exams and have only the final dissertation of the Master's Degree Course left.



Article 17 ECTS Validation from Other Degree Courses

The validation of the University Credits (CFU) earned by the student, with relative grading, in other Degree Courses of UniCamillus or in other Universities is evaluated by a specific Didactic Commission appointed by the Rector. The CFUs may be validated on the basis of a judgment of congruity with the educational objectives of one or more courses of the Didactic Plan of the Degree Course, in accordance with the provisions of current legislation and the University Didactic Regulations.

The CFUs are not validated if they have been acquired for more than 8 calendar years, unless the specifically appointed Commission does not decide otherwise.

UniCamillus may independently request confirmation from the University of origin about the presented certifications or the declarations implemented by the student in order to recognize the exams.

Article 18 Final Provisions

For the legal and interpretative purposes of this Regulation, the text approved by the Organizational Technical Committee, deposited at the Registrar's Office and written in Italian, of which a certified copy can be obtained, shall prevail. For all matters not provided for in this document, reference is made to the Statute and the Regulations that regulate the functioning of the University's activities.



DEGREE COURSE IN MEDICINE AND SURGERY

FIRST YEAR – TOTAL CFUs 60

SSD	Integrated Courses	CFU
	CHEMISTRY AND INTRODUCTORY BIOCHEMISTRY	6
BIO/10	Biochemistry	6
	BIOLOGY AND GENETICS	10
BIO/13	Applied Biology	9
MED/03	Medical Genetics	1
	PHYSICS AND STATISTICS	12
FIS/07	Applied Physics	5
MED/01	Medical Statistics	3
INF/01	Information Technology	4
SSD	Integrated Courses	CFU
	HISTOLOGY AND EMBRIOLOGY	10
BIO/17	Histology	10
	HUMAN ANATOMY I	7
BIO/16	Human Anatomy	7
	ECONOMICS AND INTERNATIONAL SOCIAL POLITICS	10
MED/02	History of Medicine	2
SECS-	Applied Economics	2
P/06		
M-	Moral Philosophy	6
FIL/03		
-		
	CLINICAL PRACTICE	5



SECOND YEAR - TOTAL CFUs 60

	BIOCHEMISTRY	12
BIO/10	Biochemistry	8
BIO/11	Molecular Biology	4
	PHYSIOLOGY I	10
BIO/09	Physiology	9
M- EDF/01	Methods and Didactics of Physical Activities	1
	MICROBIOLOGY	8
MED/07	Bacteriology	4
MED/07	Virology	3
VET/06	Parasitology	1
SSD	Integrated Courses	CFU
	PHYSIOLOGY II	10
BIO/09	Physiology	9
M- EDF/02	Methods and Didactic Approaches of Sports Activities	1
	IMMUNOLOGY AND IMMUNOPATHOLOGY	4
	General Pathology	4
MED/04	General ratiology	4
MED/04	HUMAN ANATOMY II	7
BIO/16		
· · ·	HUMAN ANATOMY II	7
· · ·	HUMAN ANATOMY II Anatomy	7 7
· · ·	HUMAN ANATOMY II Anatomy ELECTIVE COURSES	7 7 1



THIRD YEAR- TOTAL CFUs 60

SSD	Integrated Courses	CFU
	SISTEMATIC PATHOLOGY I	10
MED/10	Respiratory System Diseases	2
MED/11	Cardiovascular System Diseases	2
MED/21	Chest Surgery	1
MED/22	Vascular Surgery	3
MED/23	Heart Surgery	2
	LABORATORY MEDICINE	8
BIO/12	Clinical Biochemistry and Clinical Molecular Biochemistry	2
MED/05	Clinical Pathology	2
MED/07	Microbiology and Clinical Microbiology	2
VET/06	Clinical Parasitology	1
MED/16	Rheumatology	1
	CLINICAL SEMIOTICS	8
MED/18	General Surgery	4
MED/09	Internal Medicine	4
	ELECTIVE COURSES	3
SSD	Integrated Courses	CFU
	PHARMACOLOGY	8
BIO/14	Pharmacology	8
	GENERAL HYGIENE	6
MED/42	General and Applied Hygiene	6
	ANATOMIC PATHOLOGY	14
MED/08	Anatomic Pathology	14
	ELECTIVE COURSES	3



FOURTH YEAR - TOTAL CFUs 60

SSD	Integrated Courses	CFU
	SYSTEMATIC PATHOLOGY II	12
MED/12	Gastroenterology	2
MED/13	Endocrinology	3
MED/14	Nephrology	2
MED/24	Urology	3
MED/49	Dietary Technical Sciences	2
	SISTEMATIC PATHOLOGY III	10
MED/15	Blood Diseases	2
MED/09	Internal Medicine	2
MED/16	Rheumatology	1
MED/17	Infectious Diseases	5
	ELECTIVE COURSES	1
	CLINICAL PRACTICE	7
SSD	Integrated Courses	CFU
	OBSTETRICS AND GYNAECOLOGY	5
MED/40	Obstetrics and Gynaecology	5
	PSYCHIATRY	5
MED/25	Psychiatry	3
M- PSI/08	Clinical Psychology	2
	CLINICAL PRACTICE	11
	PEDIATRIC SCIENCES	9
MED/38	General and Specialized Pediatrics	4
MED/38	Pediatric and Infant Surgery	3
MED/20 MED/39	Infant Neuropsychiatry	2



FIFTH YEAR - TOTAL CFUs 60

SSD	Integrated Courses	CFU
	NEUROLOGICAL SCIENCES	6
MED/26	Neurology	4
MED/27	Neurosurgery	2
	DISEASES OF MUSCOSKELETAL SYSTEM	4
MED/33	Diseases of Muscoskeletal System	4
	DIAGNOSTIC IMAGING AND RADIOTHERAPY	4
MED/36	Diagnostic Imaging and Radiotherapy	4
	SPECIALIST DISCIPLINES	6
MED/28	Oral Diseases	2
MED/30	Eye Diseases	2
MED/31	Otolaryngology	2
	CLINICAL PRACTICE	10
SSD	Integrated Courses	CFU
	GENERAL SURGERY	10
MED/18	Diseases of the Respiratory System	10
	DERMATOLOGY AND PLASTIC SURGERY	5
MED/35	Sexually Transmitted Diseases and Skin Diseases	3
MED/19	Plastic Surgery	2
	THESIS PREPARATION	5
	CLINICAL PRACTICE	10



SIXTH YEAR - TOTAL CFUs 60

SSD	Integrated Courses	CFU
	INTERNAL MEDICINE AND MEDICAL GENETICS I	8
MED/45	General, Clinical and Pediatric Nursing Sciences	1
MED/03	Medical Genetics	1
MED/09	Internal Medicine	4
MED/06	Medical Oncology	2
	FORENSIC MEDICINE	4
MED/43	Forensic Medicine	4
	EMERGENCY MEDICINE	3
MED/41	Anaesthesiology	3
	SCIENTIFIC ENGLISH	6
L- LIN/12	English Language	6
	CLINICAL PRACTICE	7
SSD	Integrated Courses	CFU
	INTERNAL MEDICINE AND MEDICAL GENETICS II	9
MED/45	General, Clinical and Pediatric Nursing Sciences	1
MED/03	Medical Genetics	1
MED/09	Internal Medicine	4
MED/06	Medical Oncology	3
	CLINICAL PRACTICE	10
	FINAL EXAM	13