PART TWO: SPECIFIC STUDY COURSES RULES

TITLE VIII – DEGREE COURSE IN MEDICINE AND SURGERY (Class LM/41 ex M.D. 270/04) – (VENUE OF ANCONA)

Art. 32 – Introduction and objectives

- These Rules are applied to the didactic activities of the Single-Cycle Master's Degree Course (SCMDC) in Medicine and Surgery, belonging to the Master's Degrees classification – LM/41, activated at Marche Polytechnic University. The SCMDC in Medicine and Surgery pertains equally to every Department of the Faculty of Medicine; the designated Department of reference is the Clinical and Molecular Sciences Dept. (DISCLIMO – from the Italian "Dip. di Scienze Cliniche e Molecolari).
- 2. The SCMDC allows the issuing of the Master's Degree in Medicine and Surgery. The Diploma Supplement will show the information on all the activities carried out. The degree, obtained according to MD 58/2018 and following edits, is qualifying for the medical profession.
- 3. The information relative to the professional Profile, job and career opportunities expected for graduates and to specific teaching objectives are described in the SUA (from the Italian "Scheda Unica Annuale"), updated yearly. The SUA is available in the University's website "Assicurazione Qualità Quality Assurance at the following link: <a href="https://www.univpm.it/Entra/Ateneo/Assicurazione_qualita_1/Riesame_Annuale_e_Ciclico_dei_Corsi_di_Studio/Rapporti_di_Riesame_Annuale_CdS/Schede_dei_Corsi_di_Studio_SUA_e_Riesami_d ei_Corsi_di_Studio_1/L/0

Art. 33 – Admission procedure

- 1. Admission to SCMDC in Medicine and Surgery is open to those in possession of a high school Diploma or of other approved study title obtained abroad.
- 2. The necessary knowledge requirements for admission are related to those subjects included in the national written admission test such as general knowledge and logical reasoning, physics and mathematics, chemistry, biology.
- 3. The passing of the admission test attests the possession of the required knowledge for access.
- 4. The admission test is entirely in English and the access to the SCMDC in Medicine and Surgery happens on a national ranking basis.
- 5. The knowledge of the English language (B2 level minimum) is another requirement for access to the study course for all the students. The testing of this requirement is considered passed when a score equal to or better than the Ministry-set minimum for admission is obtained.
- 6. The University organizes Italian language courses for foreign students, both written and verbal, with references to disciplinary glossary to grant an efficient professionalizing experience in the hospital practice.
- To admitted students who did not score at least 20% of correct answers in the admission test for one or more of the three subjects of Biology, Chemistry, Physics and Mathematics, supplementary mandatory credits (OFA- from the Italian "Obblighi Formativi Aggiuntivi", Additional Training Obligations) are assigned.
- 8. O.F.A.s are met with attendance to remedial courses organized by the university, during the academic year, via e-learning or other didactic methods. The non-attendance of at least 70% of the planned intensive courses means, for the student, the impossibility to sit the exams of the 1st academic year.

Art. 34 – Didactic organization of the course

- 1. The standard length of the course for obtaining the single-cycle Master's Degree in Medicine and Surgery is of 6 years.
- 2. In order to meet the educational objectives, the SCMDC is made of 360 CFU (from the Italian "Credito Formativo Universitario" equivalent to 1 ECTS credit) total, 282 of which are dedicated to fundamental or characterizing activities and similar; 60 to Professionalizing Training Activities PTA- 15 of which are dedicated to the Evaluative Practice Traineeship EPT) and 18 to other didactic activities such as: Electives (Elective Teaching Activities ETA) 9 CFU; Linguistic knowledges (2 CFU) and thesis preparation (7 CFU). The course is structured in 12 semesters and 35 monodisciplinary/integrated courses, each carrying a specific amount of CFU.
- 3. The CFU is a unit of measurement of learning workload, individual study included, required by the student to carry out each Educational Activity, outlined by the didactic rules, in order to obtain the study title. To each CFU corresponds an effort by the student of approximately 25 hours, of which usually not more than 12 are made of the standard lectures by the professor. Each credit assigned to the various activities corresponds to:
 - 12 hours of lectures or equivalent didactic activities; the remaining 13 refer to individual study.
 - 25 hours dedicated to professionalizing activities, electives and final test.

The credits for each Educational Activity are assigned to the student after the passing of an oral and/or written exam or of another method of profit evaluation decided by the course's Professor and communicated to the students at the beginning of the teaching.

Procedures and didactic methods

The didactic activity is intended with the student as the core of the educational project.

The teaching method put in place is interactive and multi-disciplinary, with the daily integration of fundamental sciences/ clinical disciplines/ bioengineering disciplines and clinical engagement of students who are trained towards a correct approach with the patient.

Among those methods we can find the "Research" and/or "Problem Based Learning", the tutorial system, the clinical trigger, decision making and the broad use of seminars and conferences.

Problems of fundamental sciences, engineering and of clinical field are faced, although in different proportions, with a unitary and strongly integrated vision, even with the use of multi-voiced didactic.

Interdisciplinarity

The educational course is organized so as to combine the typical expertise of the standard physician with the essential ones of the biomedical engineering, offering in each of the six years of the course an integrated path between the SCMDC in Medicine and Surgery (LM/41) and the three-years Bachelor's in Biomedical Engineering (L/8).

The interdisciplinarity of the course is granted by the constant co-existence of teachings from both the SCMDC in Medicine and Surgery as well as from the Bachelor's in Biomedical Engineering, along with the presence of integrated teachings Med/Eng.

The first 3 years are mainly focused on fostering the integration between medical and engineering disciplines, while the last 3 years are dedicated to clinical education and to professionalizing/qualifying educational activities (PTA and EPT).

The first 2 years comprehend those subjects that are part of the fundamentals of the medical education, as well as the biomedical engineering one, such as Mathematics, Chemistry, Physics, and also subjects that lean more towards the engineering knowledge but are becoming more and more essential in the medical field too (bioengineering, information elaboration systems ...).

This effective contamination is furthered during the third year, when the bioengineering and its different branches continues to combine with the more standard Medicine and Surgery course's characterizing subjects.

Starting from the 4th year clinical teachings are introduced and integrated by practice of the engineering methodology, with the aim of supporting the resolution of clinical problems and manage the patient's data.

Professionalizing/qualifying studies

The course's interdisciplinarity is also ensured through the professionalizing/qualifying studies.

The professionalizing studies, immediately integrated from the 1^{st} year, include the acquisition of skills pertaining to the medical or engineering disciplines divided in the various steps of the study course.

The professionalizing activity of the second triennium highly considers the possibility of using, in the field practice, those integrated approaches learned during the first triennium. In some specific clinical PTA an engineering teacher/tutor will guide and help the student in the use of specific technologies and devices.

The *medical*, the *surgical* and *general medicine* areas activity that is included between the 5th and 6th year, along with the professionalizing opportunity, is also made up of the 15 CFUs of the EPT which is instrumental in the issuing of the qualification to practice the medical profession.

Optional Engineering course

Medicine and Surgery students are also granted, during their educational studies, the opportunity to obtain further fundamental knowledge and skills in the engineering field through additional and optional activities offered during the 2nd and 3rd year of the course for a total of 30 additional CFUs. These credits will be recognized in excess to the 360 required to obtain the Medicine and Surgery Degree. The course, organized in this manner, will allow Medicine and Surgery students to also request, at the end of the 6 years, the issuing of the Bachelor's Degree in Biomedical Engineering.

Logistics

The Medicine and Surgery SCMDC is carried out at the Marche Polytechnic University; during the first triennium, the first semester takes place mainly at the Faculty of Engineering while the second, mainly dedicated to the clinical education, takes place at the Faculty of Medicine.

The relative professionalizing activities follow the same logic; those carried out at the Faculty of Medicine also employ the use of simulation equipment present in the didactic spaces of the "Labskill", located in the Eustachio building of the Faculty of Medicine and Surgery.

The second triennium, while maintaining its goal of integration we already highlighted, takes place almost always at the Faculty of Medicine; this, in particular, to ease and encourage the attendance in the hospital structures included in the educational network.

Art. 35 – Educational studies and didactic articulation

- The present Rules are completed by the yearly scheduled document during the activation phase of the SCMDC with reference to the relative contingent of students available on our Faculty's website at the following link <u>https://www.medicina.univpm.it/?q=study-plan</u> and attached to these Rules. (Attachment 2).
- 2. In Attachment 2 the following Degree Course's characteristics are described:
 - The educational activities offered
 - The list of teachings, with the indication of the relative scientific-disciplinary sectors (SSD) of reference and the potential articulation in different modules, as well as the other educational activities;
 - The assigned CFUs for every educational activity;
 - The course's year during which each educational activity is planned to be issued.
 - The issuing period (semester or year).
- 3. In the teaching sheets available in the Syllabus program by logging in the following link (<u>https://guide.univpm.it/guide.php?fac=medicina&lang=lang-ita</u>) the requirements, the expected learning outcomes, the program, the teaching methods and knowledge evaluation methods are clarified.
- 4. The Medicine and Surgery SCMDC does not offer personalized study plans for the student. The only educational activities which are left to the student's choice are the "Electives" (ETA). The Electives selection takes place between a range of proposed teachings that the Study Course Council offers each year. During each year the choice will have to happen while granting, if present and if CFUs allow it, elective teachings from both areas.

Art. 36 – Mandatory Attendance

Every educational activity (fundamental, characterizing, integrative, elective, professionalizing) activated in the Study Course, as indicated by art. 18 -part 1, require a mandatory attendance.

Art. 37 – Pre-requisites

The *pre-requisites* are a logical and timeline succession in exam registration and expresses the obligation to pass some exams before taking others.

Pre-requisites are defined every year in the study Manifesto, approved by the Faculty's Council.

The pre-requisites are:

To seat for these exams	The passing of the following exam(s) is mandatory		
Human Anatomy I	Cell Morphology and Function		
Biochemistry, Pharmacology and Human Physiology I	Human Anatomy I		
Microbiology Immunology and Technical Sciences	Biochemistry, Pharmacology and Human Physiology I		
Human Anatomy II	Human Anatomy I		
Biochemistry and Human Physiology II	Biochemistry, Pharmacology and Human Physiology I and Human Anatomy II		
Medical and Surgical Semeiotics and Pathology	Microbiology Immunology and Technical		
Organ System Diseases 1: Blood, Heart and Lung	Sciences		
Public health	Pathology		
Pharmacology			
Oncology, Genetics and Internal Medicine			
Clinical Neurosciences and Mental Health			
New Radiology Diagnostic and Therapeutic Modality			
Head and Neck Diseases			
Dermatology, Plastic Surgery and Infectious Diseases			
Bone and Joint and Technologies in Rehabilitation			
Patient Management			
Pediatrics, Obstetrics and Gynecology			
Healthcare Robotics and Active Ageing			
Emergency and Life Support and Legal Medicine and Bioethics			
Organ System Diseases 2: Kidney and Genitourinary System	Organ System Diseases 1: Blood, Heart and Lung Medical and Surgical Semeiotics and Pathology		
Organ System Diseases 3: Endocrine and Gastrointestinal Systems, Nutrition and Metabolism	Organ System Diseases 2: Kidney and Genitourinary System		
Patient Management	Pharmacology Organ System Diseases 3: Endocrine and Gastrointestinal Systems, Nutrition and Metabolism		

Concerning the PTA, there will be an ongoing evaluation expressed by the tutors assigned to each group through a judgment of suitability, which will be documented in the personal booklet. Once the assessment of suitability for each foreseen skill has been obtained, the student will be able to take the exam in the context of the foreseen sessions. To be admitted to the ETP of the 6th years it is necessary to be enrolled in the sixth year of the single-cycle master's degree course "Medicine and Surgery" and to have passed the exams up to the fourth year and "New Radiology Diagnostic and Therapeutic Modality" exam.

Art. 38 – Methods of conduct of the final test

The methods of conduct for the final test are outlined in Art. 27 of these didactic regulations – Common norms, and better detailed in the "Educational service delivery Procedure" available at the following link: <u>https://www.univpm.it/Entra/Engine/RAServeFile.php/f/qualita/SGQ%20aree%20didattiche/Medicina/P.FM</u>.01_REV_12_del_21_01_2022_DEF.pdf

More precisely, in order to get admitted to the final test of the SCMDC in Medicine and Surgery the student must have obtained all of the CFUs planned in the didactic rules of the Study Course with the exception of the CFUs assigned to the final test and obtained upon doing the final test itself.

The final test of the SCMDC in Medicine and Surgery, which is qualifying according to MD 58/2018 and following edits, consists of the dissertation of a thesis necessary to certify the level of technical-scientific and professional preparation obtained. The Degree thesis written in an original manner will be ultimated under the guidance of a relator and will concern a topic/project developed following the established multi-disciplinary approach. The thesis will be written and presented in English.

The thesis may be of experimental nature or theoretical-applicative and for its drafting the student may use the help of a co-supervisor Professor.

The exam is passed with a minimum score of 66/110.

The mark is assigned by the commission in relation to the student's curriculum and final test.

The *laude* is assigned with a two-third majority of the members of the commission.

The methods of conduct for the final test are outlined in Art. 27 of this regulation – common Norms, and better detailed in the Educational service Delivery Procedure available at the following link: <u>https://www.univpm.it/Entra/Engine/RAServeFile.php/f/qualita/SGQ%20aree%20didattiche/Medicina/P.FM</u> .01_REV_12_del_21_01_2022_DEF.pdf

In particular, regarding the criteria for the Medicine and Surgery Master's Degree's score assignment that are applied to every student enrolled in the SCMDC in Medicine and Surgery starting from the 2022/2023 contingent, provisionally and until a Study Course's Council is nominated, the following is established:

[A] Base	Arithmetic average of the 32 exams $*$ 110/30, calculated as arithmetic average of the 32 grades from the mandatory teachings + the PTA grade of the 6 th year + 1 grade obtained from the arithmetic average of every Elective course chosen and passed (therefore both the ETA and internships are included in the average)		
	Experimental thesis	max	5 points
[B]	Clinical records presentation thesis	max	3 points
Thesis	Compilative thesis (a thesis which is not	max	2 points
evaluation (max	based on original research)		
7 points)	Quality of the presentation	max	1 point
	Mastery of the subject	max	1 point
	Degree during the June/October session		4 points
[C]	Degree during the March session.		2 points
Bonuses	Number of laudes: 0.3 for each laude until a maximum of		3 points
(max 7 points)	International exchanges: from 0 to 1 point in relation to the number of exchanges, their duration, the results	max	1 point
	Taking part in extra-curricular didactic activities.	max	1 point

Candidates who have achieved a final grade greater than or equal to 110 can be awarded with "*laude*" with a two-third majority of the members of the commission. To define the type of thesis, exceptions made for edits that might be later applied by the Study Course's Council, the frame of reference is the following:

Experimental thesis	 Fundamental research studies using theoretical or concrete lab techniques. Clinical and epidemiological studies of operations. Observational-type clinical and epidemiological studies (across the board, lengthwise, case-control) integrated by: study protocol, data gathering and adequate statistical analysis. Retrospective observational studies on series of patients chosen from the hospital and/or clinic with proper statistical analysis and a documented study protocol. The number of the sample must be adequate. Analysis and systematic review of the literature with meta-analysis and production of quantitative results.
Clinical records presentation thesis	• Clinical records presentation: clinical data description of a series of patients chosen from hospital and/or clinic background without statistical elaboration.
Compilative thesis	 Analysis and review of the literature, also systematically, without statistical elaboration of the data and production of quantitative results. Case report: Description of the symptoms, signs, diagnosis, treatment and follow-up of one or more patients.

The President of the Study Course

Prof.ssa Simona Magi