HUMANITAS UNIVERSITY

Academic Regulations

Degree Programme in Medical Imaging and Radiotherapy Techniques

(qualifying licence to practise for the healthcare profession of Medical Radiographer)

Index

Foreword – Scope

The degree programme in Medical Imaging and Radiotherapy Techniques (qualifying licence to practise for the healthcare profession of Medical Radiographer) is part of the class of degrees in technical medical professions (L/SNT3), lasts three years and requires the acquisition of 180 university credits for the degree to be awarded. These regulations govern its academic specifications and, with due respect for the freedom of teaching and the rights and duties of teaching staff and students, specify its organisational aspects, in analogy with the relevant academic specifications. These regulations are drawn up according to the provisions of Article 11 of Ministerial Decree 270/04, the Ministerial Decree of 19 February 2009 and the University Academic Regulations of Humanitas University.

Article 1 – Training objectives

The aim of the degree programme in Medical Imaging and Radiotherapy Techniques is to produce technical professionals who know how to work in an ever-changing environment. This requirement becomes even more evident in a national and international context where the advancement of artificial intelligence necessitates a training pathway that enables the acquisition of competencies essential for managing algorithms that harness big data and are able to continuously monitor the data outputted by equipment.

Medical Imaging and Radiotherapy Techniques graduates are responsible for the tasks laid down in Ministry of Health Decree No. 746 of 26 September 1994, as amended and supplemented. Ministerial Decree 746/1994 defines Medical Radiographers as medical professionals who, "either independently or in collaboration with other medical professionals, conduct all procedures involving the use of ionizing radiation sources – both artificial and natural – thermal and ultrasonic energy, and nuclear magnetic resonance, as well as interventions for physical or dosimetric protection, all on medical prescription". Medical radiographers: a) take part in the planning and organisation of the work in their respective healthcare facilities within the scope of their competencies b) plan and manage the provision of multipurpose services within their competence in direct collaboration with radiologists, nuclear physicians, radiation oncologists and medical physicists. This entails adhering to diagnostic and therapeutic protocols previously defined by the head of the facility c) take responsibility for their actions by, in particular, conducting regular equipment checks, addressing minor issues and implementing verification and control programmes to guarantee quality according to predefined indicators and standards d) carry out their duties in public or private healthcare facilities, either as employees or as freelance professionals.

Upon completion of their training pathway, Medical Imaging and Radiotherapy Techniques graduates must have acquired knowledge (knowing), competencies (knowing how to do) and interpersonal skills (knowing how to be) that enable them to practise their profession in a constantly

changing environment, where technology is a fundamental element in the professional's life. In particular, the programme will provide knowledge and competencies in biological phenomena, elucidate the primary mechanisms governing organ and apparatus function, and enable students to apply the scientific and experimental method to analyse anatomical, physiological, and technological phenomena relevant to the profession. Furthermore, students will acquire specialised competencies characteristic of the profession (radiobiology and radiation protection, diagnostic imaging and radiotherapy equipment and techniques, and image processing and archiving techniques). They will learn the basic cultural and professional principles for applying diagnostic and therapeutic technologies, understand and exploit the full potential of these, carry out quality control, and participate in identifying and selecting optimal investigative processes.

Article 2 – Employment opportunities

Medical radiographers perform their duties in public or private healthcare facilities, either as employees or as freelance professionals, using the latest health technologies and instruments. They can be employed in healthcare in conventional radiology, mammography, computed tomography, magnetic resonance imaging, interventional radiology, nuclear medicine, and radiotherapy and health physics, as well as in all complementary radiology activities. New areas of professional interest include the analysis of clinical data by processing acquired diagnostic images, applications in veterinary radiology, and the use of ionizing radiation in airports or at borders, in artistic contexts for authenticity verification and pictorial analysis, in archaeology to study human remains (palaeoradiology), cultural and architectural heritage, and foodstuffs, and in manufacturing industries and sales agencies specialising in diagnostic technologies.

The degree programme concludes with the granting of an undergraduate degree entitling the holder to practice as a Medical Radiographer (TSRM – Tecnico Sanitario di Radiologia Medica), after being entered in the professional register, as they will have taken the state examination concurrently with the oral defence of their thesis. The diploma also allows the holder to continue their studies with a first-level master's programme or master's degree and, subsequently, a research doctorate.

Article 3 – Access to the degree programme

To be admitted to the degree programme in Medical Imaging and Radiotherapy Techniques, students need to hold a secondary school diploma, or another qualification obtained abroad and recognised as suitable pursuant to Article 6 of Ministerial Decree no. 270 of 22 October 2004.

Access to the degree programme is planned nationally in accordance with Law No. 264 of 2 August 1999. The intake of students to the first year of the programme is defined annually by decree of the MIUR (the Italian Ministry of Education, University and Research), based on the university's assessment of its educational capacity and on the requirements expressed by the Lombardy Region

and the relevant ministry with regard to the need for medical staff with the professional profile of the class.

The admission test is prepared annually by the university, and registration takes place based on the ranking resulting from the admission test.

The entry requirements for the degree programme in Science and techniques for medical imaging and radiotherapy include a health assessment, in accordance with the procedures laid down by the current regulations concerning fitness to perform the functions of the specific professional profile.

Article 4 – Academic specifications

The academic specifications for the degree programme in Medical Imaging and Radiotherapy Techniques, established in accordance with current legislation, are an integral part of the Humanitas University academic specifications.

The teaching committee approves the academic specifications in accordance with current law, which provides for their subdivision into basic, characterising, related or complementary teaching and learning activities, and other activities. The specifications provide for 16 examinations leading to the acquisition of 99 university credits in various subject areas, to which the relevant scientific disciplinary fields relate. The remaining credits will be acquired through other teaching and learning activities such as internships, seminars, professionalising workshops, and the final examination for graduation.

The first year is aimed at providing a good knowledge of the essential theoretical disciplines derived from the basic sciences, with a view to their subsequent professional application. The fundamentals of the disciplines characterising the profession of Medical Radiographer in the areas covered by the course and concepts of radiation protection and safety will be taught as a prerequisite for students' first internship experiences, aimed at orienting students in the relevant professional fields and imparting basic competencies.

In the second year, students will learn the essentials of clinical science and first aid preparatory to the study of diagnostic and radiotherapy techniques applied to various body parts. During the first semester of the second year, the study plan will be oriented towards the study of body parts: chest, abdomen and pelvis.

The second semester will be devoted to the cardiovascular and musculoskeletal system from the perspective of the main clinical pathologies, and to the study of echocardiography. It will include various internships in settings where students can put into practice the knowledge, methodologies and techniques learnt.

The first semester of the third year will focus on the study of the nervous system and the specialised study of interventional radiology, health legislation and service organisation, as well as the legal,

bioethical and ethical principles that characterise the profession. Students will also acquire relational and communication competencies.

The second semester of the third year will focus on the acquisition of knowledge and methodologies inherent to professional practice. More complex technical and methodological aspects will also be addressed, with a focus on functional aspects, and with references to artificial intelligence software and big data.

Each year, the teaching committee approves the teaching and learning activity planning, defining its structure and who is responsible for teaching. The list of the subjects constituting the Medical Imaging and Radiotherapy Techniques degree curriculum, the number of credits and the indication of the scientific disciplinary sectors are set out in Table I, which forms an integral part of these regulations.

The final examination for graduation has the value of a state examination, conferring a licence to practise.

Article 5 – Duties of teaching staff

Acceptance of the teaching assignment by all degree programme teaching staff entails the observance of teaching duties according to higher education criteria, compliance with the degree programme regulations, and participation in all activities pertaining to the teaching assignment, including participation in examination committees.

Article 6 – Teaching and Learning and Professionalising Activity Coordinator

The teaching and learning and professionalising activity coordinator is appointed by the CEO on the recommendation of the head of the degree programme. Only staff with the professional profile of the degree programme may be appointed.

Among the functions assigned to the teaching and learning and professionalising activity coordinator are:

- responsibility for the design and organisation of internships and supervision of the suitability of the facilities accredited as theoretical and practical teaching sites
- responsibility for the correct implementation of the teaching and learning planning
- coordination of professionalising teaching and learning activities among the teaching staff for theoretical and clinical subjects
- nomination of clinical tutors
- management of the induction and training development of degree programme tutors
- coordination of tutoring activities

Article 7 – Tutoring activities

According to the provisions of the University Academic Regulations, tutoring for the degree programme in Medical Imaging and Radiotherapy Techniques is provided by clinical tutors.

The teaching and learning coordinator puts forward the names of the clinical tutors to the head of the degree programme, who takes them to the teaching committee for approval. Clinical tutors are chosen from among medical professionals with a professional profile relevant to the specific degree programme based on their clinical and teaching competencies.

The main functions of the clinical tutor are:

- using appropriate teaching methods to help students develop technical and interpersonal competencies, directly in a clinical setting but with support and supervision
- guiding students during clinical practice, making them active participants in the training process
- assessing the achievement of the training objectives of the students' professionalising activities and contributing to the certification evaluation

The optimal student/tutor ratio is defined on a case-by-case basis, as part of internship planning, by the teaching and learning coordinator.

Article 8 – University credits

The unit of measurement of the total commitment required of students in completing each teaching and learning activity, as outlined in the academic specifications relating to attaining the qualification, is the university credit.

The degree programme in Medical Imaging and Radiotherapy Techniques requires a total of 180 university credits, spread over three years.

Each university credit corresponds to 25 hours of student work broken down as follows:

a. 10 hours dedicated to lectures and workshops, the remaining 15 hours to personal study
b. 8 seminar hours, the remaining 17 hours dedicated to personal study
c. 20 hours of internship, the remaining 5 hours dedicated to personal reflective study

Students acquire the credits corresponding to each course by passing the relevant examination or, for activities not involving an examination, by means of certification by the teaching staff.

Students acquire the credits corresponding to internships upon completing each academic year, by being awarded a positive evaluation by the appropriate internship evaluation committee.

Article 9 – Typology of teaching and learning activities

The degree programme in Medical Imaging and Radiotherapy Techniques offers the following types of teaching and learning activities:

- *Lectures:* treatment of a specific topic identified by a title, given by one or more teaching staff members in the classroom and addressed to all students
- *Active teaching approaches:* active learning involves alternative ways in which students participate in their own learning process. These are interactive activities, addressed to small groups of students and coordinated by a tutor, with the aim of facilitating students' acquisition of technical and behavioural knowledge and skills. Learning primarily occurs through problem analysis and the application of the methodological competencies essential for problem-solving and decision-making. This takes place within the context of practical exercises and/or attendance at clinical departments, outpatient clinics or community facilities
- *Seminars:* thematic in-depth studies, possibly multidisciplinary, aimed at improving specific technical competencies. Seminars may be held by experts in the field and teaching staff from within or without Humanitas University
- *Exercises:* practical workshops on the development of technical competencies, including advanced skills, through virtual reality simulations
- *Journal club:* seminars presenting articles from the scientific literature
- *Clinical internship:* a practical teaching and learning activity, corresponding to the standards defined at European level, carried out under the supervision and guidance of specially assigned professional tutors, coordinated by a teacher with the appropriate professional profile

Article 10 – Curricular courses

The curricular courses or teaching may be extended over one or more semesters and may include non-formal teaching and learning modes, in addition to lectures and/or seminars.

Even when extended over several semesters and/or taught by several teaching staff members, including ones from different scientific disciplinary sectors, curricular courses culminate in a single examination with a single grade expressed in thirtieths.

Article 11 – Internship activities

Internship activities are an integral and qualifying part of professional training, aimed at enabling students to acquire specific skills. Clinical internships are an indispensable way of learning professional competencies, through practical experimentation and the integration of theoretical and

scientific knowledge with professional and organisational operational practice, with a view to progressively acquiring functional and managerial autonomy.

The structure and organisation of internship activities are delegated to the teaching and learning coordinator, who prepares a detailed plan of their implementation. Internship activities take place under the guidance and responsibility of clinical tutors.

In addition to existing partner healthcare facilities, the teaching and learning coordinator may suggest, to the university bodies, non-university, hospital and/or local care facilities at which the internship may take place once their didactic suitability and consequent partnership has been evaluated.

Attendance at internships is compulsory and cannot be substituted. It is certified and evaluated by the clinical tutor by filling in the appropriate evaluation form. The teaching and learning coordinator monitors the achievement of the planned number of internship hours for every single student.

The internship evaluation grade, expressed in thirtieths, includes the attendance assessment and the outcome of the final examination at the end of each year of the programme.

Internships undertaken abroad under the Erasmus programme will be assessed based on the ECTS recognition system.

Students on the degree programme in Medical Imaging and Radiotherapy Techniques are required to attend a compulsory health and safety training course, pursuant to Article 37 of Legislative Decree no. 81 of 9 April 2008, with a final test and issue of the relevant certificate. The course will take place before the start of the internship activities at the times and with the criteria indicated by the university. This training course does not entitle the holder to acquire any university credits.

Article 12 – Elective teaching and learning activities

The degree programme in Medical Imaging and Radiotherapy Techniques coordinates the provision of elective teaching and learning activities, either standalone or interconnected in "homogeneous learning paths". These activities are conducted through lessons, seminars, interactive courses in small groups, and clinical internships. Students must attend elective activities equivalent to a total number of 6 university credits over the three years.

Elective activities can also include elective internships in research facilities or in particular clinical settings; participation in conferences and congresses; and other international study programmes. Elective activities that cannot be planned during the annual assignment of teaching hours and duties must be submitted to the teaching committee for approval.

The acquisition of language and computer skills beyond those required by these regulations, and potentially obtained prior to enrolment in the degree programme, will be regarded as an elective activity chosen by the student.

The evaluation of individual elective teaching and learning activities is not expressed in a numerical grade but only in the recognition of the corresponding credits, subject to certification of attendance at the activity. The timetable of elective teaching and learning activities will be published in good time, generally together with the timetable of compulsory teaching and learning activities.

Article 13 – Compulsory attendance

Attendance at all theoretical, practical and internship teaching and learning activities included in the study plan is compulsory.

In order to be allowed to take the relevant assessment, students must have attended at least 75% of the number of hours of teaching and learning activities scheduled for each course. The internship activity must normally be completed at 100 per cent, with the possibility of catching up in the event of justified absences, subject to planning by the teaching and learning coordinator. The teacher in charge of the programme and the teaching and learning coordinator are responsible for checking that students have complied with the compulsory attendance requirement.

Should a student fail to achieve the stipulated percentage of attendance hours, they are ineligible to take the examination, other than in exceptional cases authorised by the teacher and the teaching and learning coordinator.

Article 14 – Assessments

Pursuant to the University Teaching Regulations, every course that is not an elective course, including integrated courses, culminates in a single, individual examination.

The committees formulate their judgement through a grade expressed in thirtieths. The examination is deemed to have been successfully passed with an evaluation between a minimum of 18/30 and a maximum of 30/30, to which honours may be added. Passing the examination results in the allocation of the university credits related to the course. In addition to the final examination, continuous assessment tests may be set to evaluate the effectiveness of the learning and teaching processes with regard to particular objectives, without a registered mark.

In accordance with statutory regulations, examination committees are appointed by the teaching committee on the recommendation of the head of the degree programme and the teaching and learning coordinator and are made up of at least two teaching staff members. The assessment methods (oral, written and practical tests, etc.) are defined by the teaching staff of each course and must be communicated to the students concurrently with the delivery of the course syllabus at the start of the academic year/semester. The contents of the assessment must correspond to those of the programmes effected.

Oral tests are public, and written tests must provide for the possibility of verification by the students. In the case of written tests, students may withdraw at any point in the entire length of the

test. In the case of oral tests, students may withdraw at any point up to the moment before a written record is made of the final evaluation. Students have the right to reject the proposed grade. The committee must always make a written record of examinations even in the event of failure or withdrawal by a student.

Article 15 – Examination periods and dates

Examinations for current students take place during specific periods when other teaching and learning activities are suspended. During these periods, clinical internship activities may still be carried out.

There are three examination periods:

- from the end of the first semester courses to 28 February
- from the end of the second semester courses to 31 July
- from 1 September to 30 September, except for those enrolled in the third year who have completed attendance at all the teaching and learning activities set out in the curriculum, who may take examinations until 31 January

The examination dates are set at least 60 days in advance of the tests. The timetable must be agreed between the teaching staff of the courses in the same semester in order to avoid overlapping and render it as easy as possible for students to make use of the examination dates. The length of each exam date must be such that all students who have planned to do so may take the examination on that date.

Without prejudice to the provisions on compulsory attendance and prerequisites, an examination may be taken in any examination period starting from the one immediately following the end of the relevant course.

The professionalising internship examinations take place in the period from 1 to 30 September.

Article 16 – Progression and status of students repeating/outside the prescribed course timeframe

Students who have not passed the clinical internship, which is considered a compulsory examination, are enrolled as repeat students in the year it relates to. The clinical internship evaluation committee's judgment of insufficiency imposes compulsory attendance of the entire annual schedule of clinical internship experiences planned for that year.

Students who accrue 180 university credits in accordance with the procedures set out in the degree programme teaching regulations, including those relating to the preparation of the final examination for graduation, are allowed to take the final examination and obtain the qualification, regardless of the number of years they have been enrolled at the university.

To take examinations, students must comply with the following prerequisites:

To take the examination(s) of:	Programme year	Semester	It is necessary to have taken the examination(s):	Programme year	Semester
Diagnostic techniques 1	1	annual	Cellular and molecular bases of life	1	1
Diagnostic techniques 1	1	annual	Morphological and functional bases	1	1
Diagnostic techniques 2	2	1	Cellular and molecular bases of life	1	1
Diagnostic techniques 2	2	1	Morphological and functional bases	1	1
Diagnostic techniques 3	2	2	Cellular and molecular bases of life	1	1
Diagnostic techniques 3	2	2	Morphological and functional bases	1	1
Diagnostic techniques 4	3	1	Cellular and molecular bases of life	1	1
Diagnostic techniques 4	3	1	Morphological and functional bases	1	1

Article 17 – Final examination and awarding of qualification

Pursuant to Article 7 of the Interministerial Decree of 19 February 2009, the final examination for graduation, which has the value of a state examination and confers a licence to practise, consists of:

- a practical test during which students must demonstrate that they have acquired the theoretical and practical, and technical and operational knowledge and skills of the specific professional profile
- preparation of a written thesis and its oral defence

The thesis must be written under the guidance of a supervisor.

The dates are set by decree of the Ministry of University and Research, in agreement with the Ministry of Health, in two nationally defined sessions.

In order to be admitted to the final examination for graduation, it is necessary to have obtained all the credits in the teaching and learning activities set out in the study plan, including those relating to internship and seminar activities. Six university credits are allocated to the preparation of the thesis. The final mark is expressed in hundredths.

Article 18 – Obsolescence of credits and loss of student status

A student who interrupts their enrolment in the degree programme for six consecutive academic years or has not fulfilled attendance obligations, or has failed examinations, must apply for the credits previously acquired to be validated. This request is assessed by a special committee appointed by the teaching committee. The special committee will present its assessment to the teaching committee.

1. The status of students who fail examinations, or who interrupt or suspend their studies for a period of more than eight consecutive academic years, will lapse. Students whose status has lapsed may, after passing the admission test, re-enrol in the academic degree programme. To this end, and at the request of the person concerned, the teaching committee will proceed to recognise the credits acquired previously, after checking that they are not obsolete.
2. The status of students who have passed all their examinations and who are in default only of their degree examination does not lapse.

Article 19 – Incoming transfers from other universities

Students coming from another academic degree programme who wish to apply for transfer to the Medical Imaging and Radiotherapy Techniques programme must pass the admission test and be placed in the ranking.

Those wishing to transfer from Science and techniques for medical imaging and radiotherapy degree programmes at other universities may apply to the call for applications that the university publishes after checking the number of places available.

Applications for transfer from Medical Imaging and Radiotherapy Techniques degree programmes at other universities must include all the documentation needed to evaluate the students' university credits.

These requests are assessed, based on available places, by a special committee for transfers and previous qualifications, appointed by the teaching committee.

After hearing the committee's opinion, the teaching committee recognises the appropriateness of the credits acquired and reaches a decision on their recognition, allowing students to enrol in the relevant year, pursuant to current legislation and the university academic regulations.

Article 20 – Recognition of credits acquired in other degree programmes

Students must submit their request for recognition of credits acquired in a different degree programme according to the deadlines and procedures indicated by the student office at the beginning of the academic year. These requests are assessed by the teaching staff of the courses for which recognition is sought.

After hearing the opinion of the teaching staff, the teaching committee decides on the recognition of credits acquired in previous programmes.

Article 21 – Recognition of degrees obtained abroad

Students wishing to apply for recognition of a degree obtained abroad must submit an application to the student office, enclosing the complete course of study, a detailed syllabus of university examinations taken, and any other relevant documentation (in certified translation). The

qualifications submitted by students are assessed by a special committee appointed by the teaching committee.

Article 22 – Evaluation of teaching effectiveness and efficiency

Like all the university's other degree programmes, the academic degree programme in Medical Imaging and Radiotherapy Techniques reviews the efficiency and effectiveness of its study programme every semester, through the quality assurance coordinator and in agreement with the university's evaluation committee, with particular regard to:

- organisational efficiency of the academic degree programme and its academic bodies
- quality and quantity of services made available to students
- ease of access to information related to each area of teaching and learning activity
- effectiveness and efficiency of teaching with reference to both formal and non-formal theoretical activities and to professionalising practical internship activities
- teaching and learning activities of the teaching staff in the assessment of students
- quality and organisation of tutoring assistance to students
- students' average educational performance, determined based on their academic achievements and the constancy of their progression through the university
- opinion questionnaires, whose anonymity is guaranteed

The results of the evaluation are presented to the University Evaluation Committee, which reports annually to the Board of Directors

Article 23 – Joint teaching staff / student committee

The joint teaching staff / student committee is responsible for assessing the correspondence of the results achieved with the teaching and service objectives, using student opinion surveys and other available institutional sources.

In particular, it assesses:

- the expected learning outcomes and the competencies necessary to fulfil employment prospects
- the effectiveness of the teaching and learning activity, teaching and examination methods, equipment and the logistics system
- the effectiveness of remedial actions and the transparency of the information published about the academic degree programmes

The committee is made up of an equal number of teaching staff and students, appointed in accordance with procedures defined by the applicable regulations, and taking care that the student component is adequately representative.

The committee prepares an annual report containing recommendations for improving the quality and effectiveness of the academic bodies, particularly concerning achieved learning outcomes, in relation both to employment prospects and personal and professional development, and to the needs of the economic and production system.

The recommendations are prepared after monitoring the relevant indicators referred to in Article 12, paragraph 4 of Legislative Decree No. 19/2012. They are also based on questionnaires or interviews with students duly informed about the university's quality system.

The joint teaching staff / student committee's report is submitted to the Quality Assurance Unit and the Internal Evaluation Committee by 31 December each year.

Table I: Study plan

Programme year	Semester	Integrated course	Integrated course UCs	Scientific disciplinary sectors	SDS/module UCs	Teaching and learning activities:	Subject areas
1	sem I	Cellular and molecular bases of life	4	BIO/13 – Applied biology	2	Basic	Biomedical sciences
1				MED/04 – General pathology	2	Basic	Biomedical sciences
1	sem I	Morphological and functional bases	7	BIO/09 – Physiology	3	Basic	Biomedical sciences
1				BIO/16 – Human anatomy	4	Basic	Biomedical sciences
1	sem I	Diagnostic techniques 1 (annual)	3	MED/36 – Diagnostic imaging and radiotherapy	1	Characterising	Science and techniques for medical imaging and radiotherapy
1				MED/50 – Applied medical sciences and techniques – traditional imaging	2	Characterising	Science and techniques for medical imaging and radiotherapy
1	sem I	Prevention and patient management	3	MED/43 – Forensic medicine	1	Characterising	Prevention and health services sciences
1				MED/44 – Occupational medicine	1	Characterising	Prevention and health services sciences
1				MED/45 – General, clinical and paediatric nursing sciences	1	Related and complementary	Related and complementary
1	sem I	Radiation physics and radiation protection	4	FIS/07 – Applied physics (to cultural heritage, the environment, biology and medicine)	4	Basic	Propaedeutic sciences
1	sem II	Information systems in Radiology and RTE, image processing and archiving	1	ING-INF/05 – INFORMATION PROCESSING SYSTEMS	1	Characterising	Interdisciplinary sciences
1	sem II	Diagnostic techniques 1 (annual)	7	MED/36 – Diagnostic imaging and radiotherapy	3	Characterising	Science and techniques for medical imaging and radiotherapy
1				MED/50 – Applied medical sciences and techniques – traditional imaging	4	Characterising	Science and techniques for medical imaging and radiotherapy
1	sem II	1st year English	1	English	1	For the language and the final exam	Language

1	sem II	1st year workshops	1	MED/50 – Workshops	1	Workshops	Workshops specific to the professional profile
1	sem II	1st year seminars	2	MED/50 – Seminars	2	Other activities	Seminars
1	sem II	1st year electives	2	Electives	2	Option activities	Electives
1	sem II	1st year internships	18	MED/50 – Applied medical sciences and techniques	18	Characterising	Placement differentiated by specific profile
Total 1st year university credits			**53**		**53**		
2	sem I	Fundamentals of clinical sciences	8	MED/06 – Medical oncology	1	Characterising	Interdisciplinary clinical sciences
2	sem I			MED/10 – Respiratory system diseases	1	Characterising	Interdisciplinary clinical sciences
2	sem I			MED/11 – Cardiovascular diseases	1	Characterising	Interdisciplinary clinical sciences
2	sem I			MED/12 – Gastroenterology	1	Characterising	Interdisciplinary clinical sciences
2	sem I			MED/24 – Urology	1	Characterising	Interdisciplinary clinical sciences
2	sem I			MED/26 – Neurology	1	characterising	Interdisciplinary clinical sciences
2	sem I			MED/40 – Gynaecology and obstetrics	1	Characterising	Medical and surgical sciences
2	sem I			MED/33 – Musculoskeletal diseases	1	characterising	Medical and surgical sciences
2	sem I	First aid	4	MED/09 – Internal medicine	1	Basic	First aid
2	sem I			MED/18 – General surgery	1	Basic	First aid
2	sem I			MED/41 – Anaesthesiology	1	Basic	First aid
2	sem I			MED/36 – Diagnostic imaging and radiotherapy	1	Characterising	Science and techniques for medical imaging and radiotherapy
2	sem I	Diagnostic techniques 2	12	FIS/07 – Applied physics (to cultural heritage, the environment, biology and medicine)	1	Basic	Propaedeutic sciences
2	sem I			BIO/14 – Pharmacology	1	Basic	First aid
2	sem I			MED/36 – Diagnostic imaging and radiotherapy	5	Characterising	Science and techniques for medical imaging and radiotherapy
2	sem I			MED/50 – Applied medical sciences and techniques	4	Characterising	Science and techniques for medical imaging and radiotherapy
2	sem I			ING-INF/06 – Electronic and computer bioengineering	1	Characterising	Interdisciplinary sciences

2	sem II	Diagnostic techniques 3	12	FIS/07 – Applied physics (to cultural heritage, the environment, biology and medicine)	1	Basic	Propaedeutic sciences
2	sem II			BIO/14 – Pharmacology	1	Basic	First aid
2	sem II			MED/36 – Diagnostic imaging and radiotherapy	5	Characterising	Science and techniques for medical imaging and radiotherapy
2	sem II			MED/50 – Applied medical sciences and techniques	4	Related and complementary	Related and complementary
2	sem II			ING-INF/06 – Electronic and computer bioengineering	1	Characterising	Interdisciplinary sciences
2	sem II	2nd year workshops	1	MED/50 – Workshops	1	Workshops	Workshops specific to the professional profile
2	sem II	2nd year seminars	2	MED/50 – Seminars	2	Other activities	Seminars
2	sem II	2nd year electives	2	Electives	2	Option activities	Electives
2	sem II	2nd year internships	20	MED/50 – Applied medical sciences and techniques	20	Characterising	Placement differentiated by specific profile
Total 2nd year university credits			**61**		**61**		
3	sem I	Health service organisation and professional ethics	4	M-PSI/01 – General psychology	2	Characterising	Humanities and psycho-educational sciences
3	sem I			SECS-P/10 – Health system organisation and health legislation	1	Characterising	Health management sciences
3	sem I			IUS/07 – Regulation of professional practice and professional responsibilities	1	Characterising	Health management sciences
3	sem I	Scientific English	2	English	2	For the language and the final exam	Language
3	sem I	Diagnostic techniques 4	19	FIS/07 – Applied physics (to cultural heritage, the environment, biology and medicine)	2	Characterising	Science and techniques for medical imaging and radiotherapy
3	sem I			MED/36 – Diagnostic imaging and radiotherapy	8	Characterising	Science and techniques for medical imaging and radiotherapy
3	sem I			MED/37 – Neuroradiology	2	Characterising	Science and techniques for medical imaging and radiotherapy

3	sem I			MED/50 – Applied medical sciences and techniques	5	Characterising	Science and techniques for medical imaging and radiotherapy
3	sem I			BIO/14 – Pharmacology	1	Basic	First aid
3	sem I			ING-INF/06 – Electronic and computer bioengineering	1	Characterising	Interdisciplinary sciences
3	sem II	Diagnostic techniques 5	5	MED/50 – Applied medical sciences and techniques	5	Characterising	Science and techniques for medical imaging and radiotherapy
3	sem II	Data management and analysis	3	INF/01 – Computer science	2	Basic	Propaedeutic sciences
3	sem II			SECS-S/02 – Statistics for experimental and technological research	1	Characterising	Interdisciplinary sciences
3	sem II	3rd year workshops	1	MED/50 – Workshops	1	Workshops	Workshops specific to the professional profile
3	sem II	3rd year seminars	2	MED/50 – Seminars	2	Other activities	Seminars
3	sem II	3rd year electives	2	Electives	2	Option activities	Electives
3	sem II	3rd year internships	22	MED/50 – Applied medical sciences and techniques	22	Characterising	Placement differentiated by specific profile
Total 3rd year university credits			**60**		**60**		
3		Final examination	**6**	Final examination	**6**	For the language and the final exam	Final examination
Total			**180**		**180**		