



UNICAMILLUS

# **DIDACTIC REGULATION OF THE BACHELOR'S DEGREE IN RADIOLOGY, DIAGNOSTIC IMAGING AND RADIOTHERAPY TECHNIQUES**

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Attached: Study Plan

## **Article 1 Introduction**

It is offered by the Saint Camillus International University of Health and Medical Sciences, in this document referred to as UniCamillus, the Bachelor's Degree Course in "Radiology, Diagnostic Imaging and Radiotherapy Techniques" (qualifying for the professional title of Health Technician of Medical Radiology), class L/STN3. The Course has a normal duration of 3 years and ends with a final qualifying exam and the achievement of the academic title of "Degree of Health Technician of Medical Radiology".

This regulation disciplines the structure of contents, the organization and the functioning of the Degree Course in Radiology, Diagnostic Imaging and Radiotherapy Techniques, class L/SNT3, in accordance with the M.D. 22 October 2004, n. 270.

The Degree Course (DC) has the objective of providing students with knowledge and skills necessary for the professional practice as Health Technician of Medical Radiology, class L/SNT3, as regulated by the profile M.D. 746 of 26 September 1994.

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

## **Article 2 Learning Objectives Specific to the Course**

The Course belongs to the class of degrees in "Technical Health Professions" (class L/STN-3). The graduate in "Radiology, Diagnostic Imaging and Radiotherapy Techniques" is the healthcare professional endowed with the knowledge and competences required to perform radiological investigations and services in accordance with M.D. of the Ministry of Health n° 746 of 26 September 1994.

The graduate is responsible for all procedures and interventions requesting the use of ionizing radiation both artificial and natural, of ultrasonic and thermal energy, of Magnetic Resonance, of Nuclear Medicine and Radiotherapy, as well as interventions for physical and dosimetric protection.

Their duties include:

1. maintaining, activating and using instruments;
2. recording tests' data and drafting diagnostic reports;
3. maintaining relations with patients;
4. managing operations relating to tests' security;
5. performing radiological investigations and radiotherapeutic treatments, safeguarding the radioprotection of both patients and operators;
6. cooperating for the correct management and update of radiological reports, as far as they concern them;
7. managing and transmitting the radiological images considering IT security and privacy during the entire diagnostic process;
8. carrying out activities of training and self-learning addressed to students, support staff and new employees;
9. developing research activities aimed at the production of new knowledge for the continuous quality improvement;
10. promoting actions of professional integration and participates in interdisciplinary work groups for citizen assistance.

The DC's curriculum includes educational activities aimed at the acquisition of specific knowledge and competences, related to the intended functions for the professional profile of Health Technician of Medical Radiology.

Graduates in “Radiology, Diagnostic Imaging and Radiotherapy Techniques” are endowed with an adequate preparation in basic disciplines such as to allow them maximum integration with other professions and a deeper understanding of those elements that are at the basis of physiological and pathological processes.

The achievement of professional competences is implemented through a theoretical and practical training (clinical practice and laboratory) which embraces the acquisition of behavioral skills and that must be gained in the specific working environment, so as to ensure, by the end of the training process, full mastery of all necessary skills and their immediate application within the working environment.

Particular importance, being an integral and qualifying part of the professional training, is given to the practical training activities and to the clinical practice, conducted under the guidance and supervision of specifically-assigned professional tutors STMR, coordinated by a professor holding the maximum educational level provided for the STMR professional profile and in accordance with the rules set at an European level.

### **Article 3 Professional Opportunities and Access to Postgraduate Studies**

Graduates in “Radiology, Diagnostic Imaging and Radiotherapy Techniques” can perform their professional activity in:

- public structures
- private structures
- Institutes of Research for Diagnostic Imaging, Neuroradiology, Nuclear Medicine, Radiotherapy and Medical Physics
- Industries producing electromedical equipment for radiodiagnostic, radiotherapy and nuclear medicine.

Graduates will be eligible to apply for advanced education courses:

<b>Classification of Postgraduate Courses</b>	<b>ECTS</b>	<b>Duration (years)</b>
<ul style="list-style-type: none"> <li>● Master’s Degree Course in Sciences of Technical and Diagnostic Healthcare Professions</li> </ul>	120	2
<ul style="list-style-type: none"> <li>● 1st level Master</li> </ul>	60	1 o 2

After the completion of the Master’s Degree Course in Sciences of Technical and Diagnostic Healthcare Professions, graduates will be eligible to apply for:

<b>Classification of Post-master Courses</b>	<b>ECTS</b>	<b>Duration (years)</b>
<ul style="list-style-type: none"> <li>● PhD</li> </ul>	180	3
<ul style="list-style-type: none"> <li>● 2nd level Master</li> </ul>	60	1 o 2

### **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 enrol in the first year of the course is defined annually by a specific Ministerial Decree.

In order to enrol, 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 Organization, in compliance with the current legislation and sets for each Degree Course the classification of learning activities in basic, qualifying, similar and elective, aimed at the final exam. Each educational activity is relevant to different didactic fields; they include courses to which the Scientific Disciplinary Sectors pertain.

All the didactic programmes, as well as the lessons' schedule, are available online on the UniCamillus website, [www.unicamillus.org](http://www.unicamillus.org), in the DCs' dedicated page.

### **Article 6 Typology of Learning Activities**

The Degree Course in Radiology, Diagnostic Imaging and Radiotherapy Techniques can have 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 carried out by the students thanks to their professors' tutoring;
- Practical training: practical laboratories to develop technical skills, even advanced, through simulations on dummies or directly on students;
- Professionalizing clinical practice: direct assistance to patients in a highly complex and multidisciplinary clinical care entity under the direct supervision of tutors.

For students enrolled for the first time in the academic year 2022/2023 there are the following requirements: exams that are preparatory to subsequent integrated courses (and must be passed before the relative subsequent exams) and the rules for the participation to the clinical practice:

<b>Before taking the exam of</b>	<b>it is mandatory to pass the exam of:</b>
I.C. Medical and Clinical Sciences I	I.C. Anatomy, Histology and Human Physiology
I.C. Techniques of Diagnostic Imaging II	I.C. Diagnostic Imaging Techniques I
I.C. Medical and Clinical Sciences II	I.C. Medical and Clinical Sciences I
Annual Clinical Practice (second year)	Annual Clinical Practice (first year)
Annual Clinical Practice (third year)	Annual Clinical Practice (second year)

### **Article 7 ECTS**

The unit of measurement for the work performed 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/ECTS)".

The Degree Course in Radiology, Diagnostic Imaging and Radiotherapy Techniques requires 180 ECTS in total, during the 3 years of the course, including those gained in educational activities aimed at the development of specific professional skills (Clinical Practice - 60 ECTS).

Each ECTS, equal to 25 hours of learning for the student, includes hours of frontal lessons, practice, laboratory,

seminary and other learning activities as requested by the Didactic Organization, alongside with hours of individual study and personal commitment 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.). ECTS 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 exam 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 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 learning mode for professional skills, through practical experimentation and integration of theoretical-scientific knowledge with professional and organizational operational practice.

Clinical practice performance - 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 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  $\frac{3}{4}$  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.

#### **Article 10 Elective Courses**

The Teaching Body sets the offer of elective courses, doable as frontal lessons, seminars, interactive courses in small groups, until the achievement of a total number of 6 ECTS.

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 teaching and thus are recorded in the lectures' register.

The grade obtained in these classes is taken into account for the attribution of the grade in the final exam.

### **Article 11 Director of the Didactic Activities**

The 3-year appointment is attributable exclusively to employees with a professional profile suitable for the Degree Course. The Director of Didactic Activities is selected among the professors holding a Master's Degree in Diagnostic Technical Health Professions Sciences who have no less than 5 years of experience in the education field in their Curriculum.

The Director of Didactic Activities has the responsibility to:

- plan and organize the clinical practice for the students, and ensure the adequacy of the facilities assigned for the theoretical and practical training;
- ensure the correct implementation of the educational offer;
- coordinate educational activities among professors of both theoretical and clinical disciplines;
- manage the appointment and the educational development of tutors of the Degree Course;
- coordinate the tutoring activities.

### **Article 12 Exams**

The total number of exams cannot exceed the number of the official courses established by the Regulation and anyway cannot be more than 20 during the 3 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).

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 13 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.

- personal study, for exam preparation.

### **Article 14 Final Exam and Achievement of the Academic Degree**

In order to be eligible for the final exam, the student must have acquired all the ECTS in the educational activities as in the study plan, including those relative to the clinical practice and to seminar activities.

The Final Graduation Exam constitutes a State Exam qualifying for the professional license and is composed by:

- a practical test during which the student must prove to have acquired the knowledge and the theoretical-



practical and technical-operational skills typical of the professional profile;

- draft and discussion of a thesis.

6 ECTS are acquirable by passing the final exam.

For the determination of the Graduation grade, expressed on a scale of 110, the following parameters contribute:

- 1) arithmetical average of the marks obtained in the exams scheduled in the study plan, expressed on a scale of 110,
- 2) points given by the Graduation Commission during the dissertation,
- 3) points obtained in the practical test.

#### **Article 15            Loss of the Student Status**

The enrolment as out-of-course for more than 4 academic years is not possible; after such period the enrolled student will be disqualified. Consequently, the student cannot exceed 7 academic years for the achievement of the graduation title. Disqualification does not affect students who have passed all exams and must pass only the final exam for the graduation.

The disqualified student can enrol again in the Bachelor's Degree Course after having passed again the admission test.

For this purpose the Teaching Body can, upon request of the concerned student, validate the credits acquired during the previous academic career, after checking their non-obsolescence.

#### **Article 16            Incoming Transfers from Other Universities**

Incoming transfer applications from degree courses in Radiology, Diagnostic Imaging and Radiotherapy Techniques of other universities must be complete of all the necessary documentation for the assessment of the student's academic credits. Such requests will be evaluated by an appointed Commission for transfers and previous qualifications, depending on available places.

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 17            ECTS Validation from Other Degree Courses**

Validation of ECTS acquired by the student, with relative grading, from other Degree Courses is examined from a designated Didactic Commission of professors entrusted by the Rector. ECTS can be transferred according to a judgement of congruity with the learning objectives of one or more courses of the Degree Course Didactic Organization, in accordance with the current legislation and the University Didactic Regulation.

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 of ECTS.

#### **Article 18            Final Provisions**

For juridical and interpretative purposes, the Document filed and available at the Secretariat, drafted in Italian, is authentic. As for anything non covered by this Regulation, please refer to the Statute, the Didactic Regulation and the other provisions that govern the University activities.



**STUDY PLAN OF THE BACHELOR'S DEGREE COURSE IN RADIOLOGY, DIAGNOSTIC IMAGING AND  
RADIOTHERAPY TECHNIQUES**

**FIRST YEAR - TOTAL ECTS 60**

<b>I SEMESTER</b>		
<b>SSD</b>	<b>Integrated Courses</b>	<b>ECTS</b>
	<b>BIOLOGICAL AND BIOCHEMICAL FOUNDATIONS OF LIVING SYSTEMS</b>	<b>9</b>
BIO/13	Applied Biology	2
MED/36	Radiobiology	1
BIO/10	Biochemistry	2
BIO/12	Clinical Biochemistry and Molecular Biology	2
MED/03	Genetics	1
MED/07	Microbiology	1
	<b>HUMAN ANATOMY, HISTOLOGY AND PHYSIOLOGY</b>	<b>8</b>
BIO/16	Human Anatomy and Radiological Anatomy	4
MED/36	Radiological Anatomy	1
BIO/17	Histology	1
BIO/9	Human Physiology	2
	<b>IT, STATISTICS AND PHYSICS APPLIED TO RADIOLOGICAL SCIENCES</b>	<b>8</b>
MED/01	Medical Statistics applied to Radiological Sciences	1
INF/01	IT applied to Radiological Sciences	2
ING- INF/05	Data Processing and Storage	2
FIS/07	Basics of Physics and Physics of Radiation	3
<b>II SEMESTER</b>		
<b>SSD</b>	<b>Integrated Courses</b>	<b>ECTS</b>
	<b>DIAGNOSTIC IMAGING AND TECHNIQUES I</b>	<b>8</b>
MED/36	Diagnostic Imaging and Radiotherapy	2
MED/50	Medical Sciences and Techniques	6
	<b>GENERAL HYGIENE, RADIOLOGICAL EQUIPMENT AND RADIOLOGICAL PROTECTION</b>	<b>7</b>
ING- INF/07	Electronics and IT	2
MED/36	Radiological protection	2
MED/44	Workplace Safety	3
	<b>SEMINAR ACTIVITY/IT</b>	<b>2</b>
	<b>PROFESSIONAL LABORATORIES</b>	<b>1</b>
MED/50	<b>ANNUAL CLINICAL PRACTICE</b>	<b>17</b>

**SECOND YEAR - TOTAL ECTS 60**

<b>I SEMESTER</b>		
<b>SSD</b>	<b>Integrated Courses</b>	<b>ECTS</b>
	<b>MEDICAL AND CLINICAL SCIENCES</b>	<b>7</b>
MED/33	Diseases of Locomotive System	2
MED/06	Medical Oncology	3
MED/28	Notion of Diseases of Odontostomatological System	2
	<b>SOCIAL AND INTERNATIONAL ECONOMICS AND POLITICS</b>	<b>9</b>
MED/42	General and Applied Hygiene	3
SECS-P/02	Economical Politics	4
SEC-P/07	Business Administration	2
	<b>PHARMACOLOGY</b>	<b>6</b>
BIO/14	Radiopharmaceutical	3
MED/36	Safety in the Preparation of Radiopharmaceuticals	3
<b>II SEMESTER</b>		
<b>SSD</b>	<b>Integrated Courses</b>	<b>ECTS</b>
	<b>DIAGNOSTIC IMAGING AND TECHNIQUES II</b>	<b>12</b>
MED/36	Diagnostic Imaging and Radiotherapy	6
MED/50	Medical Sciences and Techniques	6
	<b>PROFESSIONAL LABORATORIES</b>	<b>1</b>
	<b>SEMINAR ACTIVITY/IT</b>	<b>2</b>
	<b>ELECTIVE COURSES</b>	<b>3</b>
MED/50	<b>ANNUAL CLINICAL PRACTICE</b>	<b>20</b>

**THIRD YEAR - TOTAL ECTS 60**

<b>I SEMESTER</b>		
<b>SSD</b>	<b>Integrated Courses</b>	<b>ECTS</b>
	<b>PROFESSIONAL DEONTOLOGY AND ETHICS</b>	<b>4</b>
M-PSI/01	Clinical Psychology, Group Dynamics	2
MED/05	Medical Sciences and Techniques (Ethics, Deontology and Communication)	2
	<b>CLINICAL AND MEDICAL SCIENCES II</b>	<b>6</b>
MED/10	Notions of Diseases of Respiratory System	2
MED/11	Notions of Diseases of Cardiovascular System	2
MED/12	Notions of Diseases of Gastroenterology	2
	<b>DIAGNOSTIC IMAGING AND TECHNIQUES III</b>	<b>12</b>
MED/36	Diagnostic Imaging and Radiotherapy	6
MED/50	Medical Sciences and Techniques	6
<b>II SEMESTER</b>		
<b>SSD</b>	<b>Integrated Courses</b>	<b>ECTS</b>
	<b>ENGLISH LANGUAGE</b>	<b>3</b>
	<b>PROFESSIONAL LABORATORY</b>	<b>1</b>
	<b>SEMINAR ACTIVITY/IT</b>	<b>2</b>
	<b>ELECTIVE COURSES</b>	<b>3</b>
MED/50	<b>ANNUAL CLINICAL PRACTICE</b>	<b>23</b>
	<b>FINAL EXAM</b>	<b>6</b>