



## DIDACTIC HANDBOOK OF DEGREE COURSE IN PHARMACY (LM-13)

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**Duration:** 5 years

**Type of access:** Number of places programmed at local level

**Department:** Biology

**Course code:** AA4

**Pharmacy Tor Vergata Office:** Via della Ricerca Scientifica 00133 Roma – Building PP1

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**Coordinator:** Prof. Laura Di Renzo

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Our Degree Course in Pharmacy, held in the University of Rome Tor Vergata, is taught entirely in English and was founded by our School of Medicine and School of Science in partnership with the prestigious School of Pharmacy of the University of Nottingham (UK) and Alliance Boots. This collaboration offers every year the chance to perform a stage in Nottingham University to our best students, emphasizing the internationalization and making this course highly competitive and innovative.

Pharmacy is an evolving science-based healthcare profession focusing on the treatment and prevention of disease and ensuring public wellbeing. Understanding the science behind medicinal products and the impact they have on humans is at the core of our pharmacy degree. Our International Pharmacy School involves professors and experts from different sectors, such as Chemistry, Biology, Medicine, Economics and Law, as well as all other subjects traditionally associated with a modern Pharmacy Course.

We offer a solid theoretical foundation with an emphasis on practical applications in order to allow operating not only in the community or hospital pharmacy but also in the field of pharmaceutical research, in the pharmaceutical industry and in the healthcare sector. The classical didactic activity is also integrated with outstanding lectures and workshops held by qualified scientists belonging to different backgrounds.

Another great innovation of the course is the introduction of teachings in the field of Regulatory Sciences which provides an overview of the regulatory affairs in the EU and its effect on medicinal product development.

## COURSE OBJECTIVES

The Master's Degree in Pharmacy course envisages a single curriculum of studies. It intends to provide students with knowledge and skills suitable to work as a pharmacist and in many other related fields.

Together with a specific program focused on pharmacy, other subjects belonging to the medicine field are part of the programs; these are: internal medicine, dermatopharmacology and dietary sciences, as well as subjects related to the rules governing the medicine, such as Italian pharmaceutical legislation, European legislation and commercial law. The course also includes lectio magistralis, workshops, seminars and conferences held by experts of national and international reputation.

In addition, a number of visits to pharmaceutical industries will be organized in the course of the so-called "additional activities", as they are considered of great importance. This network, at national and international level, has contributed to increasingly encourage relations with professionals and representatives belonging to the pharmaceutical world. Also the growing attention to the quality of the different pharmaceutical products is contributing to the inclusion of technical-pharmaceutical skills in a number of productive sectors and in areas of recent evolution; this enhances one of the objectives of the course, i.e. the possibilities for graduates in Pharmacy to be employed in firms working in areas indirectly connected with the pharmaceutical ones. This degree course aims to give the future pharmacist not only the skills typical of the pharmacy sector, but also those ones diversified and at the same time closely interconnected with the pharmaceutical sector, such as monitoring the use of drugs on a given territory and evaluating therapies (Health Technology Assessment and Pharmaceutical economics), the reports concerning the safety of drugs (pharmaco-vigilance), and the knowledge of managerial tools such as planning, control, marketing and sales.

## ADMISSION ON THE COURSE

To be admitted to the Master's Degree Course in Pharmacy, a candidate must possess a high school diploma or an equivalent foreign qualification recognized according to current regulations.

An adequate initial background is also required with regards to basic knowledge of the following disciplines: Biology, Chemistry, Physics, Mathematics; as well as general knowledge. Candidates' readiness is ascertained by means of an admission test consisting of a multiple-choice test, and an oral test, aimed at verifying their knowledge of English, which must be at least at B2 level.

For all information concerning the admission test, the planned number of places and the general merit ranking, for Italian citizens, EU citizens and non-EU citizens legally residing in Italy, and non-EU citizens residing abroad, please consult the [course website](#) or the [Science Macro Area website](#). Candidates who have scored below a certain threshold for a specific subject listed in the call, although placed usefully in the merit ranking, may be required to complete Additional Educational Obligations (OFA). These obligations involve attending additional courses in Biology, Chemistry,

Mathematics, Physics, and English language, in addition to the ordinary teaching, and passing specific tests within the first year of the course.

## PLANNING AND DIDACTIC ORGANIZATION

The planned didactic program is defined annually in line with the deadlines indicated by the University and normally by the month of March and is then approved by the Department of reference.

The course of study establishes its planned didactic programme on an annual basis as a set of all the training activities planned for the cohort of students who enrol in the academic year of reference. It is included in the University's internal management system and published on the [Degree Course website](#). The project and planning of the educational programme are illustrated in detail for each academic year in the [Student's Didactics Guide](#), published on the [website of the Degree Course](#) and on the [Science Macro Area website](#).

The Student's Guide, edited by the Coordinator, sets out all necessary information about the course of study, such as the official study plan, the indications of any propaedeutic activities, as well as the scheduling of start dates and development of the training activities.

The [Manifesto of Studies](#), published annually on the University [website](#) and on [the Science Macro Area website](#), in the section Training Offer - GOMP, contains a list of the courses with an indication of the scientific-disciplinary sectors of reference, the possible division into modules, the credits assigned to each course, the division into years, the reference training activity (basic, core, etc.), the disciplinary field and any other indications deemed useful for the purposes indicated.

The training activities include lectures, workshops, seminars, conferences and courses, also held at suitable public and/or private institutions in Italy and abroad, which ensure IT, language and cultural relevance skills consistent with the topics of the course itself.

The skills acquired by the student, which are defined as specific, distinctive and core, are then consolidated, in compliance with the European Directives, thanks to professionalizing training internships, in pharmacies open to the public, or in hospitals, as well as study stays abroad according to international agreements or conventions established by the University.

The training is completed by courses that develop knowledge of medical-surgical facilities, dietetic, cosmetic, diagnostic and chemical-clinical products, also taking into account the employment opportunities offered within the Community.

[Courses are structured on a semester basis.](#)

The Master's Degree in Pharmacy Course foresees a total of 300 Credits (CFU) distributed as follows:

**- Lectures involving frontal teaching (including numerical and/or laboratory exercises) for 243 CFU.**

All the information regarding the planned didactic offering, the training objectives, the list of lecturers involved in the course, the teaching programs and the other training activities envisaged

by the Master's Degree Course as well as the calendar of lessons, exam sessions and other forms of final examinations are included in the University's internal management system and made known to the students on the Degree Course website together with the didactics guide to the course which is prepared annually.

**- Activities of the student's choice for 9 credits.**

The study course provides specific activities that are pre-approved to ensure coherence with the study path. These activities can contribute to the student's cultural education, provide insights into specific professional areas, and help complete practical training for pharmacists. Other activities provided by the university can also be chosen if they align with the course objectives. To record these activities, students must use a specific booklet reserved to complete exams in the study plan. The booklet must be obtained from the Didactic Secretariat and returned duly completed and signed within the set deadlines for the final exam.

**- Linguistic knowledge for 3 credits.**

Foreign students are required to achieve a level of proficiency in the Italian language equivalent to the B2 certification. This is necessary to carry out the practical evaluation test and the Practical Evaluation Internship activities to be carried out in pharmacies open to the public or in a hospital under the pharmaceutical service's supervision.

Those who do not possess an adequate knowledge of Italian will be required to sit a language proficiency test at the end of the third year. This test will be administered by the University's Italian Language and Culture Centre (CICLI) or by another accredited institution of equivalent standing. Similarly, Italian students must attain a level of proficiency in English equivalent to the C1 certification.

**- Professional internship for 30 CFU.**

The practical internship, with a total duration of 900 hours, constitutes a fundamental component of the Master's Degree Programme in Pharmacy. It may be carried out either in community pharmacies or in hospital pharmacies, in accordance with current regulations and under the supervision of qualified professionals.

The primary objective of the internship is to ensure that students acquire the practical skills and professional competencies necessary to enter the workforce with confidence and competence. Through hands-on experience, students will develop a comprehensive understanding of the pharmacist's role within the healthcare system, gaining the tools required to provide high-quality pharmaceutical services that meet the evolving health needs of the population. Particular emphasis is placed on preparing students for the so-called "pharmacy of services" model, in which the pharmacist not only dispenses medication but also contributes proactively to healthcare delivery through patient counselling, health promotion, and participation in public health initiatives.

### - Final exam for 15 CFU.

The final examination consists of the presentation and discussion of a written dissertation (thesis) on a topic relevant to the degree programs and developed under the guidance of a supervisor. The dissertation should demonstrate the student's ability to conduct independent research, critically analyses scientific literature, and apply the knowledge and methodologies acquired during the course of study.

The oral defence of the thesis takes place before an academic committee and represents the culmination of the student's academic journey. It is designed to assess not only the content and quality of the written work, but also the candidate's ability to communicate effectively, respond to critical questions, and engage in scientific discussion.

### Successful completion of the final examination leads to the awarding of the Master's Degree in Pharmacy.

The credits related to the types of educational activities are divided as follows:

ACTIVITIES	CFU
Basic courses	100
Core courses	120
Related or complementary courses	23
Courses of the student's choice	9
Linguistic Knowledge	3
Final Test	15
Training and Orientation Traineeships	30
<b>TOTAL CREDITS</b>	<b>300</b>

To determine the University Educational Credits (CFU) assigned to each course, 1 CFU corresponds to a student commitment of 25 hours. This includes 8 hours of face-to-face lectures and 15 hours of laboratory activities and exercises. For the other educational forms, the value is defined by the reference legislation.

The course study plan is valid and can be approved only if all the activities included correspond to the constraints established by the course's didactic regulations and by the planned annual teaching program relative to the student cohort of reference and involves the acquisition of a number of credits not less than that required to obtain the degree.

### COURSE ATTENDANCE

Attendance in teaching activities is mandatory and is verified through established survey methods used by the University. A certificated attendance, for at least 70% of the overall teaching activities, including lectures and exercises/laboratories, is essential for taking the relevant exams. If the attendance falls below this threshold, the Professor and/or the coordinator of the integrated course might compensate absences with activities of <sup>5</sup> their choice.

Still, if the overall attendance for all courses is less than 50%, the student will need to repeat the academic year.

There are no exemptions from participating in training activities, except in cases of severe health reasons that must be certified by a national or international public hospital. The documentation must be deposited at the Didactic Secretariat, and if it is in a language other than Italian or English, it must be translated by the competent diplomatic or consular authorities.

### **PART-TIME STUDENTS**

A student who, due to work-related, family, medical, personal, or similar reasons, believes they cannot dedicate the standard annual hours to attendance and study, may choose to enroll as a part-time student. Students who opt for part-time status will have an extended duration of their course in exchange for reduced tuition fees for the relevant course class.

The option for part-time enrollment can be exercised at the beginning of each academic year after matriculation or enrollment in subsequent years. The deadline for exercising this option, both for matriculating students and those enrolling in subsequent years, and the relevant procedures are defined annually by the University and specified in the Student Guide.

### **STUDENT MOBILITY AND OPPORTUNITIES ABROAD**

The Pharmacy Master's Degree program, in compliance with European Directives, promotes significant work to consolidate students' specific, distinct, and defining skills. This is achieved not only through professionalizing training internships but also through increasing and promoting international mobility. This can include study periods abroad based on international agreements or conventions established by the University, such as the partnership with the School of Pharmacy at the University of Nottingham, or the Overseas or Erasmus+ project, which offers the opportunity to take exams or conduct experimental theses abroad.

In this context, there are several agreements with European universities that are available to host students for training periods during which they can attend relevant courses aligned with their curriculum or carry out activities related to their experimental thesis, including in companies (Erasmus+ project).

Student mobility to foreign universities is authorized by the Department Council, which defines, based on the student's proposal, the courses to be recognized, after reviewing the course programs (learning agreement). At the end of their stay, the student must provide certification of the period of study abroad, the program completed, any exams taken, and the grades received for each course for which recognition is requested.

The Degree Course, once it verifies the correspondence between the student's work and the approved learning agreement, proposes to the Department Council the ratification of credit recognition for students participating in international mobility programs. If the credits obtained

are for different courses than those authorized, the Department Council will determine their potential recognition.

For more information on available positions and the timing for applying for the Nottingham or Erasmus+ project, you can visit the Degree Course website under the Erasmus+ or Study at the University of Nottingham sections or the University's website in English.

### ACCESS CRITERIA FOR THE PRACTICAL EVALUATION INTERNSHIP (TPV)

To be admitted to take the master's degree exam in Pharmacy, students must have completed all the courses in the educational program and acquired a total of 285 ECTS credits, distributed over 5 years of study, including the Practical Evaluation Internship (30 ECTS credits), with an additional 15 ECTS credits assigned to the final exam.

Access to the final examination for obtaining a master's degree includes the completion of a Practical Evaluation Exam (PEE), which precedes the discussion of the thesis.

The purpose of the PEE is to verify the professional skills acquired through internships within the study programs and to assess the candidate's technical preparation for professional practice. Unlike the thesis, which is discussed in English, the PEE is conducted in Italian.

The examining committee for the PEE has an equal composition and is composed of at least four members. Half of the committee members are university professors, one of whom serves as the President and is appointed by the Department. The other half consists of pharmacists designated by the professionally competent territorial Order, who have been registered in the professional register for at least five years.

Students who pass the PEE are eligible to discuss their thesis.

For all information concerning the practical evaluation internship (TPV), please consult the [course website](#)

### FINAL EXAM

The final exam consists of a discussion, in English, of an original thesis prepared by the student.

The thesis should provide a clear and detailed account of the research topic conducted under the guidance of a teaching professor at the University.

In order to start preparing his/her thesis, the student must have acquired at least **180 CFUs**.

After a presentation, the dissertation has to be discussed in the presence of the graduation commission.

To be admitted to the master's degree final examination in Pharmacy, the student must have attended all the courses provided by the Didactic Regulations and have acquired **300 CFUs** in total, divided into **5 years of course**, including those related to the internship (**30 CFUs**) and the preparation of the final dissertation (15 CFUs).

The procedures, forms, and timing for thesis requests and submissions are determined by the Didactic Secretariat of the Single-Cycle Master's Degree Course in Pharmacy. Updates on these procedures are communicated through the course's website.

The written work can focus on:

- 1) The collection and critical analysis of bibliographic material or other data relevant to the cultural and professional contents of the degree course (**compilative thesis**).
- 2) Experimental work on an original, single or multidisciplinary theme, involving data collection and analysis, such as in clinical, legislative, or bioinformatics fields (**experimental data-analysis thesis**).
- 3) Experimental work on an original, single or multidisciplinary theme in a research laboratory where a teaching professor from the degree course or other public or private institutions with appropriate agreements operates (**laboratory experimental thesis**).

The degree committee establishes the graduation grade based on the student's academic performance and the evaluation of the thesis. In particular, the average of grades obtained in curricular exams, the evaluation of the thesis and its discussion, and the potential assessment of other activities contribute to the grade. Each member has a maximum of 1.5 points at their disposal, while the President of the committee has 2 points. The graduation grade is expressed in one hundred and tenths. The final exam for obtaining the degree is passed by achieving a grade equal to or higher than 66/110. In the case of a perfect score (110/110), the committee may award "lode" (highest honors) with unanimous consent.

## TEACHING CALENDAR

### I SEMESTER:

Classes begin: September 22, 2025 (II year, III year, IV years and V year)

Classes begin: October, 6 2025 (I years)

Classes end: January 30, 2026

### II SEMESTER:

Classes begin: March 2, 2026

Classes end: May 30, 2026

*Teaching activities begin in October and end in May.*

**The academic calendar provides for three regular exam sessions:**

- **Summer session:** June-July;
- **Autumn session:** September (that ends before the start of teaching activities; in this session, students can take all exams related to the lessons of the first and second semesters);
- **Winter session:** February (this session allows students to take all exams for the first and second semesters, referring to the previous academic year and for exams whose lessons have concluded in the first semester of the current academic year).



## DIDACTIC PLAN

I Year	Mod.	CFU	SSD
General and Bio-inorganic Chemistry - 8067818		12	CHEM-03/A
Applied Mathematics-8067406		6	MATH-05/A1
Applied Physics- 8067407		6	PHYS-03/A
Human Anatomy - 8067819		8	BIOS-12/A
INTRODUCTION TO BIOLOGY-8067820		<b>9</b>	
Introduction to Biology	I	5	BIOS-04/A
Introduction to Biology	II	4	BIOS-10/A
Organic Chemistry - 8066403		8	CHEM-05/A

II Year	Mod.	CFU	SSD
Analytical Chemistry- 8067411		8	CHEM-01/A
Biochemistry I - 8067415		6	BIOS-07/A
DRUG ANALYSIS - 8067491		<b>16</b>	
Drug Analysis	I	8	CHEM-07/A
Drug Analysis	II	8	CHEM-07/A
MICROBIOLOGY AND IMMUNOLOGY- 8067821		<b>9</b>	
General and Special Microbiology	I	6	MEDS-03/A
Immunology	II	3	MEDS-26/A
MOLECULAR BIOLOGY- 8067417		<b>7</b>	BIOS-08/A
PHARMACEUTICAL BOTANY AND PHARMACOGNOSY - 8067814		<b>10</b>	
Pharmaceutical botany	I	5	BIOS-01/A
Pharmacognosy	II	5	BIOS-11/A

III Year	Mod.	CFU	SSD
Biochemistry II- 8067421		6	BIOS-07/A
<b>GENERAL AND CLINICAL PATHOLOGY - 8067423</b>		<b>10</b>	
General Pathology	I	3	MEDS-02/A
General Pathology	I	2	
Pathophysiology and Clinical Pathology	II	3	
Pathophysiology and Clinical Pathology	II	2	
General and Molecular Pharmacology and Toxicology - 8067459		8	BIOS-11/A
Human Nutrition and Dietistics- 8067424		6	MEDS-08/C
Human Physiology- 8067420		8	BIOS-06/A
Medicinal Chemistry I- 8067418		8	CHEM-07/A
Medical Statistics and Clinical Studies Methods- 8067425		6	MEDS-24/A

IV Year	Mod.	CFU	SSD
ANTIMICROBIAL AND ANTICANCER PHARMACOLOGY AND PHARMACOGENOMICS- 8067427		<b>10</b>	
Antimicrobial And Anticancer Pharmacology	I	8	BIOS-11/A
Pharmacogenomics	II	2	MEDS-01/A
Biopharmaceutics and Preformulation - 8067429		6	CHEM-08/A
INTERNAL MEDICINE AND DERMATOPHARMACOLOGY - 8067493		<b>6</b>	
Internal Medicine	I	3	MEDS-05/A
Dermatopharmacology	II	3	MEDS-10/C
Medicinal Chemistry II - 8067426		8	CHEM-07/A
Neuropsychopharmacology - 8067462		6	BIOS-11/A
NUTRITIONAL SCIENCE AND NUTRIGENOMICS- 8067428		<b>8</b>	
Nutritional science	I	6	MEDS-08/C
Nutrigenomics	II	2	BIOS-08/A
SPECIAL PHARMACOLOGY AND THERAPY- 8066714		<b>10</b>	
Special Pharmacology and Therapy	I	5	BIOS-11/A
Special Pharmacology and Therapy	II	5	BIOS-11/A

V Year	Mod.	CFU	SSD
ITALIAN AND EUROPEAN PHARMACEUTICAL LEGISLATION AND COMMERCIAL LAW- 8067432			
Italian Pharmaceutical Legislation	I		
European Pharmaceutical Legislation	II	<b>10</b>	CHEM-08/A
Commercial Law	III		GIUR-02/A
PHARMACEUTICAL TECHNOLOGY WITH PHARMACEUTICAL COMPOUNDING PRACTICES- 8067434		<b>12</b>	
Pharmaceutical Technology with pharmaceutical compounding practices	I	6	
Pharmaceutical Technology with pharmaceutical compounding practices	II	6	CHEM-08/A
REGULATORY AND PHARMACOECONOMIC ASPECTS- 8067492		<b>11</b>	
Clinical Trials and Pharmacovigilance	I	6	BIOS-11/A
Health Technology Assessment and Pharmacoeconomy	II	5	ECON-04/A
<b>Optional courses</b>		<b>12</b>	
<b>Training in Pharmacy</b>		<b>30</b>	
<b>Final Exam</b>		<b>15</b>	

### TEACHING PROGRAMS

The programs and the details of the courses provided can be consulted at the link:

<https://farmacia.uniroma2.it/didactic-area/syllabus/>