

The international course of Pharmacy

### Alma Mater Studiorum

Campus of Rimini

Single cycle degree /
Combined Bachelor and
Master

### **Presenting the Rimini Campus**

The University of Bologna has a Multicampus structure, ensuring the opportunity to learn and promoting stable research activities throughout the region, aiming to improve the operations and quality of life for the university community. The Campus of Rimini is a part of the entire multicampus structure.

The first University courses at Rimini date back to 1972; then, in the Eighties degree programmes were started in Economics and Statistics. When other degrees were added - Industrial Chemistry, Fashion, Pharmacy, Motor Science, Medicine and Educational Science - a proper university dimension began to take shape.

growth of services and scientific-teaching areas supporting students (the centralized library, the student association, ICT laboratories, a Wi-Fi network, a language centre, study rooms, services for international projects, welcome and help for foreign students, the psychological support service, etc.), and likewise laboratories for scientific and technological research on behalf of the teaching staff (laboratories for Chemistry, Pharmaceutical Chemistry and Biomedicine).

The Rimini Campus is also actively supported by Local Institutions providing concrete help to integrate and boost the University Campus



Over the years the Rimini set-up has grown in many senses: from a few dozen students in the 1970s, to over 6,000 enrolled for the last academic year; from two degree programmes to today's 19; from a handful of teaching staff to over 100 at present; and in 2012 the creation of an innovative department - the only one such in Italy - the Department for Life Quality Studies.

To match this expansion, there has been a

in a spirit of awareness that working together towards common goals is a winning strategy for economic and social development of the surrounding area.

Over the years we have seen more and more young people from other areas of Italy, Europe and the whole world enrolling in Rimini degree programmes. This affords some confirmation that the quality of our education is competitive not just within the Italian peninsula but internationally as well.

### Welcome to the Rimini Campus Branch

### President's welcome

Dear Students, Rimini, as you will see, is a campus where young, motivated lecturers and assistant professors work closely with competent technical and administrative personnel, attentive to student's needs.

The program catalogue offers a range of high-quality courses attuned to specific local characteristics. Also, the number of degree programmes taught entirely in English is increasing every year, evidence of the strong international vocation of the campus and the city that hosts it.

Our premises are all in the city's historic centre, within easy reach of the railway station. Many services are available specifically for students: student residences, interdisciplinary library, study rooms open all day and on weekends, IT and scientifictechnological laboratories, internet points and wireless network.



Rimini, as you will quickly realise, is a dynamic, welcoming city with a major business presence, with which our university has developed important links. The opportunities for human, cultural and professional growth in these places are many, and I'm sure that you'll take full advantage of them during your time here.

The priority of the whole academic community here is to make your time at university stimulating, gratifying and full of successes. It's up to you to take up the challenge by committing yourselves to make the best of this opportunity.

### Welcome to the Rimini Campus.

### Alessia Mariotti

President of the Rimini Campus Branch



# Learning objectives of THE COURSE OF PHARMACY

The Single Cycle (Combined Bachelor & Master) Degree Programme in Pharmacy spans five years and has the main objective of providing the theoretical and practical knowledge to train graduates with a solid scientific basis to work as pharmacist and in the health sector as experts in medicinal and health products (dietetic and nutritional, herbal, medical-surgical, sanitaryware, etc.).

The aim of the course is to train a professional who can show the final outcomes:

- (a) to play the role of health educator and to participate in institutional campaigns managed in collaboration with the public administration in different health fields:
- (b) at the time of dispensing medicinal products to be competent and to supply the instructions, warnings, advice and checks before and after drugs/health products use;
- (c) play a crucial role as a link between patient, doctor and public health service facilities.



Finally, the Pharmacy graduate must have the knowledge and the learning skills required to continue the training process in Specialization Schools comprised in the Pharmaceutical Area, in PhD Courses and in Level II professional Master's degrees.

The educational objectives of the Pharmacy Single Cycle Degree Programme comply with the requirements of the national legislation and the European Community Directive 85/432/EEC and subsequent amendments and supplements.

The pharmacist has the ability to carry out professional activities such as: medicines procurement, conservation and dispensation, galenic preparations, quality control, pharmacovigilance, health promotion, health education, information on medicines and medical devices, (hospital pharmacist) consumption/cost analysis monitoring,

inspection and management (hospital pharmacist) on narcotics, pharmacoepidemiology (hospital or territorial pharmacist).

Furthermore, the territorial pharmacist participates in monitoring pharmaceutical spending, supervising and planning drug distribution activities, managing pharmacy administration.

In the process of planning the educational objectives of the Pharmacy Single Cycle Degree Programme, the consultation with private.and public enterprises social partners have been carefully taken into account. New peculiar functions related to the pharmacist professional qualifications, already drawn up at national level and by the European Union, have been identified. In particular these professional functions comprise integrated home care, first aid, health assistance, appropriateness in the use of medicines, dispensing medicinal products in therapeutics repeated prescriptions, information and education for the correct use of some medication; regarding the territorial pharmacist: information on medicine for health care workers,

pharmacovigilance, monitoring and management of on trial medicinal products.

# Access requirement

In order to be admitted to the Pharmacy Single Cycle Degree Programme, students must either have a five-year secondary high school Diploma, or a four-year with a supplementary year Diploma awarded by secondary education institutions or other titles identified in the Call for Applications.

It is also necessary to possess knowledge and skills in Mathematics, Physics, Biology, Chemistry and Logic, on the basis of the High School programs. The Pharmacy Degree Board adopts a restricted access number of students in relation to available resources. The number of students that can be enrolled and the way in which the selection will be performed shall be made public each year.

All the information for the enrolment will be available every year on the Programme web page: <a href="https://corsi.unibo.it/singlecycle/Pharmacy-Rimini">https://corsi.unibo.it/singlecycle/Pharmacy-Rimini</a>



The Pharmacist carries out his professional activity mainly in the following areas at:

- (a) Pharmacies open to the public, fulfilling the following requirements functions:
- provides controlled storage and dispensation of medicinal products and distribution of health products;
- prepares and controls medicinal and masterly galenic preparations;
- provides information and clarification on: storage, content, therapeutic activity, posology, modalities and time of administration, side effects of dispensed medicines:
- provides information and clarification on the correct use of dietary supplements and furnishes correct nutritional information.
- (b) Hospital pharmacies, meeting the following specifications functions:
- handles drugs and other medical supplies, at all stages from procurement and storage at the dispensation of the products, including the experimental drugs;
- evaluates, prepares, manages and dispenses preparations for the enteral and parenteral administration in collaboration with other healthcare professionals;
- assesses prescriptions for particular medications, and supervises the use of drugs and medical devices;
- processes knowledge in trends in pharmaceutical consumption and expenditure.
- c) Territorial Pharmaceutical Services of

the National Health Service, where it performs the following functions:

- supervises the proper performance of service and assistance by the pharmacies that have an agreement with them;
- monitors the pharmaceutical prescription and the development of pharmacovigilance activities:
- promotes information and documentation on and activities aimed at rationalizing the drug use;
- collaborates in the definition and planning of processes directed towards improving pharmaceutical care.



- (d) Pharmaceutical, cosmetic and food industries, where performs the following functions:
- provides for the chemical and biological quality control of the raw materials used in the formulations of medicines and health products (dietary supplements and cosmetics);
- provides for the preparation of the various pharmaceutical forms and their quality control;

- carries out study and research activities in the specific field of the drug.
- e) Universities and public and private research institutions, where it carries out research activities in the field of pharmaceuticals.

The graduate from the Single Cycle Degree Programme in Pharmacy is directly qualified\* to practice as a pharmacist upon registration with the professional association, and may perform all professional activities provided for in Directive 85/432/EEC as amended and supplemented.

Whoever is graduated in the Single Cycle Degree in Pharmacy may work as:

- community pharmacist in territorial pharmacies open to the public, in Italy and in EU countries;
- hospital pharmacist in hospitals and nursing homes, after the acquisition of the Specialization in Hospital Pharmacy, to be acquired after graduation in Pharmacy;
- territorial pharmacist in the Health Authorities;
- pharmacist in Public Administrations and Armed Forces;
- pharmacist and/or researcher in pharmaceutical, cosmetics and food industry;
- responsible pharmacist for the intermediate distribution of medications;
- pharmacist sales assistant in the pharmaceutical and Health product industries (Law 248/06).

In addition, the graduate from the Single Cycle Degree in Pharmacy may move on to the following activities: medical representative, professor or university researcher, technical director in pharmaceutical/health product industries. The training course may consider also other professional activities carried out in the Union European Pharmaceutical Industry, in order to allow for equal employment opportunities at European level.

\*pending approval

### **Characterazing subjects**

Plant Biology; Pharmaceutical Botany; Drug Analysis; Biochemistry; Molecular and Clinical Pathology, Advanced analysis of health products, Medicinal and Toxicological Chemistry; Nutrition Physiology and Nutritional biochemistry and Nutraceutics; Pharmacognosy and Phytotherapy; Pharmacology, Pharmacogenetics and Pharmacotherapy; Molecular Basis of Biotechnological Drugs; Pharmaceutical Technology and Galenic Pharmacy; Principles of Pharmaceutical and Clinical Care; Pharmacy Financial Management; Digital Healthcare, Advanced drug delivery and Nanotechnology; Pharmaceutical Law, Ethics and Regulation; Pharmacovigilance and Pharmacoepidemiology; Toxicology.



# COURSE STRUCTURE DIAGRAM OF PHARMACY DEGREE

Period	Courses	SSD	CFU
1	Elements of Animal Biology, Elements of	BIO/05	3 3
1	Genetics IC (Integrated Course)	BIO/18	
2/1	Physics, Elements of Mathematics IC	FIS/01	7
2/ 1		MAT/05	5
2 Acquisition of Computer Skills And Biostatistics		4	
2	General and Inorganic Chemistry CHIM/03		10
1-2	Human Anatomy	BIO/16	7
1-2	Plants Biology, Pharmaceutical Botany	BIO/15	9
2	Bioethics		3
	Elective for 4 ECTS from the list below (4-12 CFU)		*
2	Basic Life Support And Life Styles (IC) BIO/16		4
2	Introduction and Perspectives of Pharmacy Course CHIM/08		4
2	Lingua Italiana per Stranieri - B1		4
	Soft Skills provided by the University and annually approved (max limit 12 CFU)		

SECOND YEAR			
Period	Courses	SSD	CFU
1	Analytical Chemistry	CHIM/01	6
2	Human Physiology	BIO/09	10
1	Microbiology and Public Health, Elements of Epidemiology (I.C.)	MED/07 MED/42	9
1	Organic Chemistry	CHIM/06	10
2	Drug Analysis I	CHIM/08	8
2	General and Molecular Biochemistry	BIO/10	10

THIRD YEAR			
Period	Courses	SSD	CFU
1	Drug Analysis II	CHIM/08	8
1	Applied Medical Biochemistry	BIO/10	. 6

1	Molecular and Clinical Pathology (I.C.)	MED/04	7
	Molecular and Chilical Facilology (i.c.)	BIO/12	3
2	Medicinal and Toxicological Chemistry I	CHIM/08	9
2	Pharmacognosy and Phytotherapy	BIO/14	6
2	Advanced Analysis of health products	CHIM/08	. 6
2	Nutritional Physiology, Nutritional	BIO/09	7
	Biochemistry and Nutraceutics (I.C.)	BIO/10	,
1-2	General Pharmacology,		
	Pharmacogenetics and	BIO/14	8
	Pharmacotherapy I -		

FOURTH YEAR			
Period	Courses	SSD	CFU
1/2	Molecular Basis of Biotechnological Drugs (I.C.)	CHIM/08 BIO/14	3 5
1	Medicinal and Toxicological Chemistry II	CHIM/08	9
1	Pharmacology and Pharmacotherapy II	BIO/14 .	9
1	Pharmaceutical Technology and Galenic Pharmacy	CHIM/09	12
1	Principles of Pharmaceutical and Clinical Care Digital Healthcare (I.C.)	BIO/14 MED/05 ING-INF/06	3 3 3
	Elective for 4 ECTS from the list below (4 CFU) Preparation/Internship Final Dissertation (12 CFU)		
1	Internship Final Dissertation Abroad		12
1	Internship Final Dissertation		12
1	Methods and Research Tools for The Compilative or Practical-Professional Dissertation	12	
1	Preparation Final Dissertation	12	
1	Preparation Final Dissertation Abroad		12

FIFTH YEAR			
Period	Courses	SSD	CFU
1	Advanced drug delivery and Nanotechnology	CHIM/09	8
1	Pharmacy Law, Ethics	CHIM/09	. 8
	and Regulation I.C. (Pharmacy Financial Managment)	SECS-P/07	3
1	Pharmacovigilance and Pharmacoepidemiology	BIO/14	5

1	Toxicology	BIO/14	9
1	Professional Internship (6 months at an open public or hospital pharmacy)		30
2	Final Examination LM		3
	Total No. of Credits (CFU)		300
	Total No. of examinations	30	

### **Info and contacts**

#### **DEGREE PROGRAMME COORDINATOR FOR INFORMATION ON:**

Degree Programme (general information), admission requirements and procedures, administrative procedures

#### **ARIANNA LUCCARELLI**

Via dei Mille 39, 47921 Rimini cdlm.pharmacy@unibo.it TEL: +39 0541 - 434112

OTHER INFO

Receiving on appointment on Microsoft Teams (Monday to Friday). Please send an email to the contact indicated to book an appointment.

### **DEGREE PROGRAMME OFFICE FOR INFORMATION ON:**

Teaching organisation of the degree programme, support for the preparation of study plans.

### **ARIANNA LUCCARELLI - STEFANIA GIOVAGNOLI**

Via dei Mille n. 39 - Rimini (RN)

TEL: +39 0541 434 112 FAX: +39 0541 4 34565

### PROGRAMME DIRECTOR FOR INFORMATION ON:

Scientific and didactic aspects of the Degree Programme

### **PROF. VINCENZO TUMIATTI**

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https://corsi.unibo.it/singlecycle/Pharmacy-Rimini



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