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School of Pharmacy, Biotechnology and Sport Science  
LAUREA MAGISTRALE A CICLO  
UNICO (SINGLE CYCLE DEGREE/  
COMBINED BACHELOR AND MASTER  
- 300/360 ECTS) IN CHEMISTRY AND  
PHARMACEUTICAL TECHNOLOGIES  
A.Y. 2013/2014

Programme Director Prof. Carlo Bertucci

REPORT

Study Programme Report  
Chemistry and Pharmaceutical Technologies  
Programme ex D.M. 270/04 - Code 8412 - Class LM-13  
School of Pharmacy, Biotechnology and Sport Science  
Programme Director Prof. Carlo Bertucci

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## WHAT IS THE STUDY PROGRAMME REPORT?

### What is the Study Programme Report?

The Study Programme Report provides updated information which is important for the purposes of Quality Assurance and is published annually by the University of Bologna.

The main aspects of the teaching programme are described in detail, with a view to assuring the principle of transparency and promoting self-assessment and continuous improvement processes.

The document provides a concrete overview of the features and results of the Study Programme for students, families, employers and so on.

For example, regarding the current issue of employment, it describes the learning outcomes and career opportunities; it also includes statistics on the percentage of employed graduates (D.4. Employment situation).

The document is organised into five sections and a glossary:

### A. Presentation and prospects

Key information on the Study Programme, including the expected learning outcomes, career opportunities and further studies.

### B. Teaching and Learning

The updated course structure diagram with the full titles and listings of the course units and the latest published lecture timetable.

### C. Resources and services

The list of teaching staff and their relative curricula, the offices (secretariats), services (work placements) and infrastructures (libraries, laboratories) available to students.

### D. The Study Programme in Figures

Key data shows how many students are enrolled, how many have been assigned additional learning requirements, how many drop out after the first year, how many graduate in line with the programme schedule, the opinions of attending and graduating students on the teaching programmes and information concerning graduate employment.

### E. Find out more: the quality of your Study Programme

How the quality system applied to your Study Programme works. The quality system of your Study Programme is a set of processes and responsibilities adopted to guarantee the quality of all Study Programmes at the University of Bologna.

### NOTES:

- Reports are available for all Study Programmes for which it is possible to enrol in the first year in academic year 2012/2013: the information and data provided is as updated as possible.
- Sections A, B and C provide data for the academic year 2012/2013.
- Section D presents data regarding the Study Programmes in the last three academic years.
- The information and data were taken from the University databases and the reports published by the [Statistical Observatory of the University of Bologna](#) and [AlmaLaurea](#), and are updated to **15 June 2012**.

## A. PRESENTATION AND PROSPECTS

*This section presents the key information concerning the Study Programme, including the expected learning outcomes, career opportunities and further studies, updated to the academic year 2013/2014.*

### A.1. PRESENTATION

*This paragraph provides information on the specific learning outcomes of the Study Programme and the curriculum.*

The main objective of the five-year, single cycle degree programme in Chemistry and Pharmaceutical Technologies (CTF) is to provide students with the methodological bases of scientific investigation applied to the chemical, biological, pharmacological, pharmaceutical and technological-pharmaceutical sectors. This knowledge will allow graduates to work and manage all kinds of pharmaceutical issues in the pharmaceutical industry. The study programme particularly examines chemical (Physical chemistry and Organic chemistry), biochemical and chemical-pharmaceutical disciplines and pays particular emphasis on practical laboratory work. This multidisciplinary approach allows graduates to work in many areas of the pharmaceutical industry, including chemical (pharmaceutical design, production and control) and biomedical sectors.

The learning outcomes of the degree programme comply with the provisions of national legislation and with EC directive 85/432/EEC.

The CTF degree programme offers essential preparation for becoming a professional community- or hospital-based pharmacist or for more general career opportunities in pharmaceutical consulting, information and distribution. The single cycle CTF degree programme also provides the skills required to sit the Italian state exams to become a professional pharmacist as well as the state exams under Presidential Decree no. 328 of 05/06/2001 to register with Section A of the Professional Association of Chemists.

The above learning outcomes are achieved through:

- 1) basic learning activities (mathematics, physics, chemistry, biology, medicine) to develop a solid scientific foundation for the understanding and study of the core disciplines;
- 2) core learning activities (chemistry, pharmaceutical and technological, biological and pharmacological studies) offering a command of the chemical and structural features of active ingredients, pharmaceutical forms and raw materials used in medicinal formula, as well as the pharmacological bases of their mechanism of action including the pharmaco-therapeutic, toxicological and pharmacovigilance aspects;
- 3) learning activities focusing on the knowledge of legislative and ethical practices concerning various aspects of professional activity (commercial release of medicines, health products, medical and surgical products; pharmacoeconomics; scientific drug information; marketing; etc.);
- 4) related and complementary activities to complete the graduates' professional training.

Supported by the highly qualified teaching staff at the Faculty, the degree programme in Chemistry and Pharmaceutical Technologies aims to complete students' chemistry training in areas of computational medicinal chemistry and analytical methods applied to the study of drug-protein interaction. These contents distinguish the programme from other similar courses offered by other universities. During the study programme students must choose learning activities worth at least 8 CFU from the selection suggested in the study programme or others offered at the University in order to complete their practical and professional training.

In compliance with the European Directives, students will undergo practical training during a 6-month, full-time internship (worth 30 CFU) in a public pharmacy (community pharmacy) or a hospital (hospital pharmacy), with which special agreements have been signed, under the supervision of a pharmacist-coordinator.

At the end of the study programme, students must present an experimental dissertation for the final examination. The degree programme also provides students with a solid knowledge of the English language.

All core SSDs will provide an appropriate balance of theoretical and experimental CFUs over several academic years, allowing students to acquire complete and in-depth knowledge and skills in the pharmaceutical field.

During Year I, the degree programme promotes tutorials which allow students to better understand the topics studied and therefore pass the relative exams. The Degree Programme Board, together with the Faculty teaching committee, monitors the students' careers to identify and correct any critical areas, reduce the risk of drop-outs and help students to stay on schedule.

### A.2. ADMISSION REQUIREMENTS

*This paragraph provides information on the knowledge required for admission to the Study Programme.*

Students wishing to enrol in the degree programme in Chemistry and Pharmaceutical Technologies must possess knowledge of: Mathematics, Physics, Biology and Chemistry, as laid down in the ministerial programmes for secondary schools.

In order to enter the course, candidates are required **to sit and pass** a compulsory entry test.

Despite passing the test mentioned, students who do not reach the minimum expected score are allowed to enter the course provided that they follow preparatory tutorials.

Any additional learning requirements will be fulfilled in the methods described in the degree programme teaching regulations.

## INFORMATION on entry TEST (italian)

### A.3. LEARNING OUTCOMES

*This paragraph provides information on the knowledge and skills students will have acquired by the end of the Programme.*

Chemistry and Pharmaceutical Technologies graduates will:

- know and understand the aspects of mathematics, computing, physics and chemistry needed to gain a command of the scientific methods applied to professional problem-solving;
- know and understand organic chemistry, biology, biochemistry, anatomy and physiology, pathology, pharmacology and medicinal chemistry for the design of biologically active molecules;
- know and understand the main analytical techniques;
- know and understand dietary products, cosmetics and medical-surgical products;
- know and apply pharmaceutical technologies;
- know and understand the legal contexts in which pharmaceutical industries and pharmacies operate.

The acquired knowledge and understanding provide the foundations for continuing further studies, working in the pharmaceutical industry, in teaching or other professional environments.

The teaching tools used to develop this knowledge are lectures, a wide range of tutorials and practical laboratory work. The described learning outcomes will be assessed mainly through written and oral exams and practical laboratory work.

### A.4. CAREER OPPORTUNITIES

*This paragraph provides information on the occupational profile, functions and fields of employment available to graduates of this Programme.*

Professional figure: INDUSTRIAL PHARMACIST

Functions:

The industrial pharmacist carries out his professional activities mainly in:

a) The chemical-pharmaceutical industry, with the following functions:

- design and synthesis of active ingredients;
- industrial production of medicines;
- development and validation of analytical methods for raw materials and finished products, alone or in formulations and complex matrices;
- physico-chemical characterisation of excipients and active ingredients; research and development of new dosage forms; production and validation of in vitro assays;
- production and control of medical devices and medical-surgical products;
- production of regulatory documents.

b) The cosmetics and dietary industries, with the following functions:

formulation, production, packaging; quality control, stability and toxicological evaluation of cosmetics and dietary products

c) Drug and healthcare product control laboratory, with the following functions:

- control of drugs and medicines even in complex matrices;
- analysis and control of food and dietary products;

d) After passing the state exam, under the terms of EC Directive 85/432/EEC, he may exercise the profession of Pharmacist, managing the following activities:

- preparation, control, storage and distribution of medicinal products in public pharmacies;
- preparation of dosage forms of medicinal products;
- production and control of medicinal products;
- analysis and control of drugs and healthcare products;
- storage, conservation and distribution of wholesale medicinal products;
- preparation, control, storage and distribution of medicinal products to hospitals;
- dissemination of information and advice on drugs and healthcare products;

e) Working in community pharmaceutical services belonging to the National Health Service, with the following functions:

- oversees the correct running of the services and pharmaceutical assistance by the associated pharmacies;
- monitoring drug prescriptions and development of pharmacovigilance activities;
- promoting drug information and documentation and activities aiming to rationalise drug consumption;
- collaborating to define and plan processes to improve pharmaceutical assistance.

Career opportunities:

Chemical and pharmaceutical industry

Public and private research centres

Pharmaceutical laboratories

Cosmetics industry  
Dietary and food industry  
National Health Service  
Private and hospital pharmacies  
Sales outlets as described in article 5 of Italian law 248/06  
Further studies:  
1 PhD  
2 Specialisation school (e.g. hospital pharmacy)  
3 2nd level Master's Degree Programme

## A.5. OPINION OF SOCIAL PARTNERS AND POTENTIAL EMPLOYERS

*This paragraph describes the outcome of the consultation with the representative employment and trade organisations.*

This information is not available in English at this time.

## A.6. FURTHER STUDIES

**Further studies:**

1 PhD  
2 Specialisation school (e.g. hospital pharmacy)  
3 2nd level Master's Degree Programme



## B. TEACHING AND LEARNING

*This section describes the updated course structure diagram (for academic year 2013/2014), with the full titles and listings of the course units and the latest published lecture timetable.*

### B.1. COURSE STRUCTURE DIAGRAM

*The link takes you to the Study Programme course structure diagrams. You can also access to each course unit content.*

- [Study plan: all course units in the programme](#)

### B.2. CALENDAR AND LECTURE TIMETABLE

*The links take you to the teaching calendar (exam session and final examination session) and the lecture timetable (in Italian).*

- [Lecture timetable](#)
- [Exam sessions](#)
- [Final examination sessions](#)

## C. RESOURCES AND SERVICES

*This section provides a list of teaching staff and their relative curricula and a description of the services available to students for the academic year 2013/2014.*

### C.1. TEACHERS

*The paragraph lists the lecturers who teach in the Study Programme: from here you can access the personal web pages of each one. Information updated to 28 May 2013 (in Italian).*

#### **Permanent teaching staff:**

<a href="#">Albertini, Beatrice</a>	<a href="#">Cervellati, Rinaldo</a>	<a href="#">Guardigli, Massimo</a>	<a href="#">Passerini, Nadia</a>
<a href="#">Amorati, Riccardo</a>	<a href="#">Ciurli, Stefano Luciano</a>	<a href="#">Guernelli, Susanna</a>	<a href="#">Pession, Annalisa</a>
<a href="#">Bartolini, Manuela</a>	<a href="#">Di Pietra, Anna Maria</a>	<a href="#">Hrelia, Patrizia</a>	<a href="#">Poli, Ferruccio</a>
<a href="#">Bertucci, Carlo</a>	<a href="#">Falconi, Mirella</a>	<a href="#">Hrelia, Silvana</a>	<a href="#">Prata, Cecilia</a>
<a href="#">Bigucci, Federica</a>	<a href="#">Fato, Romana</a>	<a href="#">Leoni, Alberto</a>	<a href="#">Recanatini, Maurizio</a>
<a href="#">Bolognesi, Maria Laura</a>	<a href="#">Fattori, Patrizia</a>	<a href="#">Lucarini, Marco</a>	<a href="#">Roberti, Marinella</a>
<a href="#">Brigidi, Patrizia</a>	<a href="#">Gallinella, Giorgio</a>	<a href="#">Luppi, Barbara</a>	<a href="#">Romualdi, Patrizia</a>
<a href="#">Cantelli Forti, Giorgio</a>	<a href="#">Garuti, Laura</a>	<a href="#">Mantovani, Barbara</a>	<a href="#">Rosini, Michela</a>
<a href="#">Capranico, Giovanni</a>	<a href="#">Gatti, Rita</a>	<a href="#">Masiero, Stefano</a>	
<a href="#">Cavallari, Cristina</a>	<a href="#">Ghedini, Nadia</a>	<a href="#">Mezzina, Elisabetta</a>	
<a href="#">Cavalli, Andrea</a>	<a href="#">Gotti, Roberto</a>	<a href="#">Minarini, Anna</a>	

#### **Contract teaching staff:**

[Di Sabatino, Marcello](#)  
[Navarria, Francesco Luigi](#)

### C.2. STUDENT SERVICES: OFFICES

#### C.2.1. FUTURE STUDENTS

*The link take you to the webpage which provides specific information about the offices and the services for the future students (in italian).*

- [Future students](#)

#### C.2.2. ENROLLED STUDENTS

*The link take you to the webpage which provides specific information about the offices and the services for the enrolled students (in italian).*

- [Enrolled students](#)

#### C.2.3. INTERNATIONAL STUDENTS

*The link take you to the webpage which provides specific information about the offices and the services for the international students (in italian).*

- [International students](#)

#### C.2.4. GRADUATES

- [Graduates](#)

## D. THE STUDY PROGRAMME IN FIGURES

Information on students' starting their university careers, how many students are in line with the regular programme, opinions of students and graduates on the teaching programmes and information concerning graduate employment.

This section provides the data of the last academic years for the Study Programme (SP) and a comparison with similar Study Programmes. The University of Bologna has divided its Study Programmes into four groups:

- **BIOMEDICAL** group: Study Programmes of the Schools of Pharmacy, Biotechnology and Sport Science; Medicine; Agriculture and Veterinary Medicine
- **SCIENTIFIC-TECHNOLOGICAL** group: Study Programmes of the Schools of Engineering and Architecture; Sciences
- **SOCIAL SCIENCES** group: Study Programmes of the Schools of Economics, Management, and Statistics; Law, Political Sciences
- **HUMANITIES** group: Study Programmes of the Schools of Arts, Humanities, and Cultural Heritage; Foreign Languages and Literatures, Interpreting and Translation; Psychology and Education

The section presents the results of the Study Programme for the last three academic years.

Main data shows how many students enrolled, the number of students assigned additional learning requirements, how many drop out after the first year, how many graduate in line with the programme schedule, the opinions of attending and graduating students on the teaching programmes and information concerning graduate employment.

The information and data presented in this section, updated to 28 May 2013, were taken from University databases and *AlmaLaurea*.

Study Programmes may be subject to degree programme system modifications from one academic year to the next, and the data provided in this section may refer to a programme with a slightly different system to the one currently running (such as programme title, course structure diagram and list of lecturers). However, indicatively the data presents the general trend of the Study Programme over the past three years.

Most of the Study Programmes running at the University of Bologna have been reformed in compliance with DM 270/04, most of them from the academic year 2008/2009. For this reason for the previous academic years for some information, as opinion of the graduates and employment situation, are provided in the reports of those Programmes, on the paragraph D.5. refers to the Study Programmes as they were presented prior to the reform.

### D.1. STUDENTS STARTING THEIR UNIVERSITY CAREERS

Characteristics of incoming students at the beginning of their university careers. Tables and graphs provide information on the number of registered students, focusing on the characteristics of the students, results of any entrance tests and the students assigned any additional learning requirements.

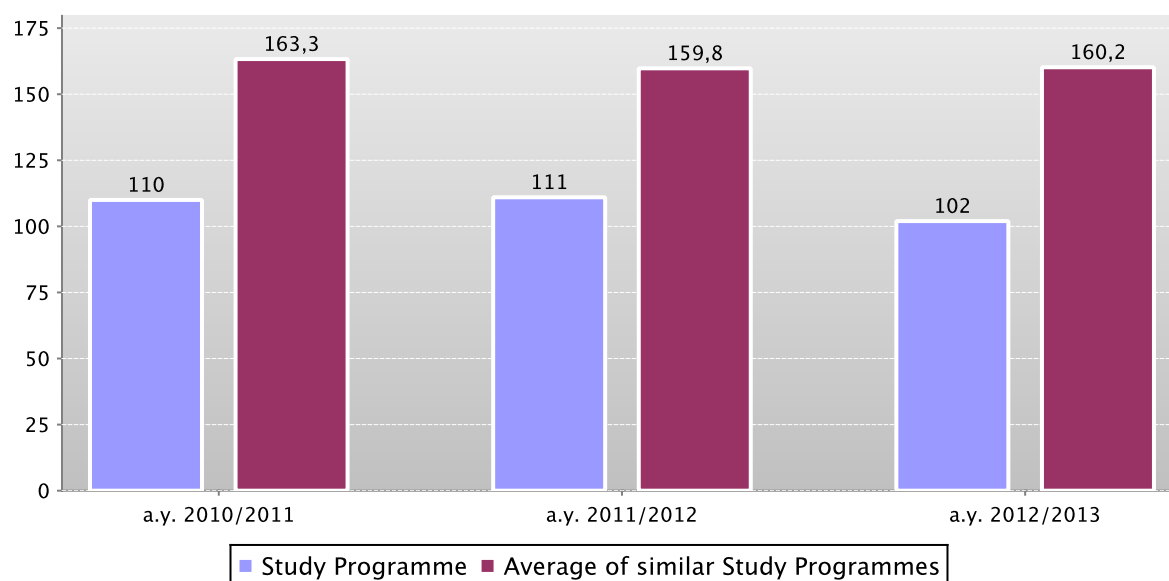
#### D.1.1. ENROLMENTS AND REGISTRATIONS

The **graph** shows the number of students enrolled in the 1st year compared with the average of similar Study Programmes (which belong to the same group).

In addition, the **table** shows the total number of registered students and the total number of enrolled students.

Data of the Study Programme is compared with the average of the Study Programmes of average of similar Study Programmes (which belong to the same group) for the indicated academic years.

First year enrolments



	a.y. 2010/2011			a.y. 2011/2012			a.y. 2012/2013		
	Registered students	N. first year enrolments	Total N. enrolled students	Registered students	N. first year enrolments	Total N. enrolled students	Registered students	N. first year enrolments	Total N. enrolled students
Study Programme	113	110	110	93	111	202	70	102	278
Average of similar Study Programmes	122,2	163,3	565,9	111,7	159,8	557,8	111,2	160,2	552,7

## D.1.2. ADDITIONAL DATA ON STUDENTS' STARTING THEIR UNIVERSITY CAREERS

### D.1.2.1. CANDIDATES REGISTERED FOR THE ENTRANCE EXAM

The number of students sitting the [entrance exam](#) for the Study Programme. Concerns the programmes with restricted access. The methods of managing the call for applications and the list of candidates, including the methods for filling any unclaimed places, may vary from year to year.

The **table** shows the number of places available for the study programme, the number of candidates enrolling for the exam, the number sitting the exam and the percentage of students sitting the exam compared to the number of places available.

For all programmes with restricted access, candidates are required to sit an entrance exam and there are a limited number of places available. The entrance exam is a test which is used to draw up a graded list of candidates; students may enrol in the programme according to their place in the list. The methods of managing the call for applications and the list of candidates, including the methods for filling any unclaimed places, may vary from year to year. The test may be specific to a Degree Programme or may be part of a single exam covering several programmes from the same university or from other universities (during the registration the students should indicate their first choice).

The following definitions apply:

**Available places** = the number of places laid down in the call for applications to the Study Programme, or determined by subsequent legal provisions; these exclude any additional places reserved according to special provisions of the programme (e.g. for international study programmes, they do not include places for foreign students selected from other universities; for all programmes with restricted access regulated nationally, these do not include the places reserved for transferring students).

**Number of candidates for the exam** = number of students registered for the exam indicating the study programme as their first choice;

**Number of participants in the exam** = number of students participating in the exam indicating the study programme as their first choice;

**Number of participants in the exam for every available place** = number of students participating in the exam who indicated the study programme as their first choice as a ratio of the number of places available on the programme.

	Number of places available (a)	Candidates registered for the exam	Candidates sitting the exam (b)	Number of candidates sitting the exam per place available (b/a)
a.y. 2010/2011	160	200	165	1
a.y. 2011/2012	130	274	259	2
a.y. 2012/2013	120	304	295	2,5

**D.1.2.2. INCOMING STUDENTS**

Geographic origin, type of high school certificate, age and gender of students.

Data shows a homogeneous group of students (**cohort**) which started together their academic career.

Students which have **passed** to an other Study Programme, **transferred** from an other university, or registered to a 2nd degree are not included.

The **tables** show the number, geographic origin, gender, age, type and grade of high school certificate of students enrolling in the degree programme.

The Study Programme data is compared with the **average of similar Study Programmes (which belong to the same group)**, for the indicated academic years.

		Registered students	Geographic origin					Gender		Average age of registered students		
			Students coming from the province of the Study Programme site	Students coming from other provinces where Unibo has a site	Students coming from other provinces of Emilia Romagna region	Students coming from other Italian regions	Students coming from abroad	M	F	19 or less	20 - 24	25 or more
Students 2010/2011	Study Programme	113	29,2%	23,0%	5,3%	42,5%		30,1%	69,9%	87,6%	12,4%	
	Average of similar Study Programmes	122,2	33,4%	22,4%	4,5%	33,3%	6,4%	37,4%	62,6%	83,9%	14,3%	1,8%
Students 2011/2012	Study Programme	93	22,6%	17,2%	6,5%	52,7%	1,1%	29,0%	71,0%	91,4%	8,6%	
	Average of similar Study Programmes	111,7	27,5%	22,7%	4,2%	40,0%	5,7%	35,1%	64,9%	82,8%	15,5%	1,6%
Students 2012/2013	Study Programme	70	28,6%	20,0%	2,9%	44,3%	4,3%	31,4%	68,6%	84,3%	15,7%	
	Average of similar Study Programmes	111,2	28,8%	22,3%	7,3%	38,4%	3,1%	40,8%	59,2%	81,3%	17,1%	1,6%

		High school certificate					Grade of High school			
		Vocational schools	Technical Colleges	High school specializing in education and in psycho-pedagogical science	High schools specializing in classical studies, modern languages, science education	Other Italian or foreign high schools	Grade ranging from 60 to 69	Grade ranging from 70 to 79	Grade ranging from 80 to 89	Grade ranging from 90 to 100
Students 2010/2011	Study Programme	6,2%	10,6%	5,3%	76,1%	1,8%	13,3%	26,5%	27,4%	32,7%
	Average of similar Study Programmes	1,6%	5,2%	1,9%	80,9%	10,4%	10,5%	20,5%	26,2%	37,1%
Students 2011/2012	Study Programme		3,2%	1,1%	93,5%	2,2%	7,5%	19,4%	32,3%	40,9%
	Average of similar Study Programmes	0,6%	2,4%	1,8%	86,6%	8,7%	7,3%	15,8%	27,3%	44,2%
Students 2012/2013	Study Programme		12,9%	1,4%	78,6%	7,1%	8,6%	20,0%	32,9%	32,9%
	Average of similar Study Programmes	1,2%	5,5%	1,8%	85,6%	5,8%	6,4%	15,6%	28,5%	45,3%

### D.1.2.3. ADDITIONAL LEARNING REQUIREMENTS

Students on the programme assigned **additional learning requirements** (OFA). OFA are learning requirements assigned to enrolled students who have not demonstrated the full possession of the entrance requirements. The assessment methods of students' initial preparation and the fulfilment of the OFA are described in the Study Programme Regulations, and may change each year. Students not completing the additional learning requirements are obliged to re-enrol in year 1 as repeating students.

The **table** shows the number of **registered students**, the number of students assigned OFA, the number who fulfilled them, the percentage of students assigned OFA compared to the number of enrolled students and the percentage fulfilling the OFA compared to those assigned them.

	Registered students (a)	Students assigned OFA (b)	Students who fulfilled OFA (c)	% of students assigned OFA compared to the number of enrolled students (b/a)	% of students fulfilling the OFA compared to number of students assigned (c/b)
Students 2010/2011	113	0			
Students 2011/2012	93	0			
Students 2012/2013	70	0			

\*Note: At the time of publication of this report the number of students fulfilling the OFA can be measured for a.y. 2009/2010 and a.y. 2010/2011 only.

## D.2. REGULARITY OF STUDIES

*Insight into the regularity with which the students pass their exams.*

*Graphs and tables provide information on the number of students who leave the programme after the first year and the number of regular graduates, focusing on the number of credits obtained at the end of the first year, on the exams passed and average grade achieved for each course unit.*

### D.2.1. STUDENTS LEAVING THE PROGRAMME BETWEEN YEARS 1 AND 2

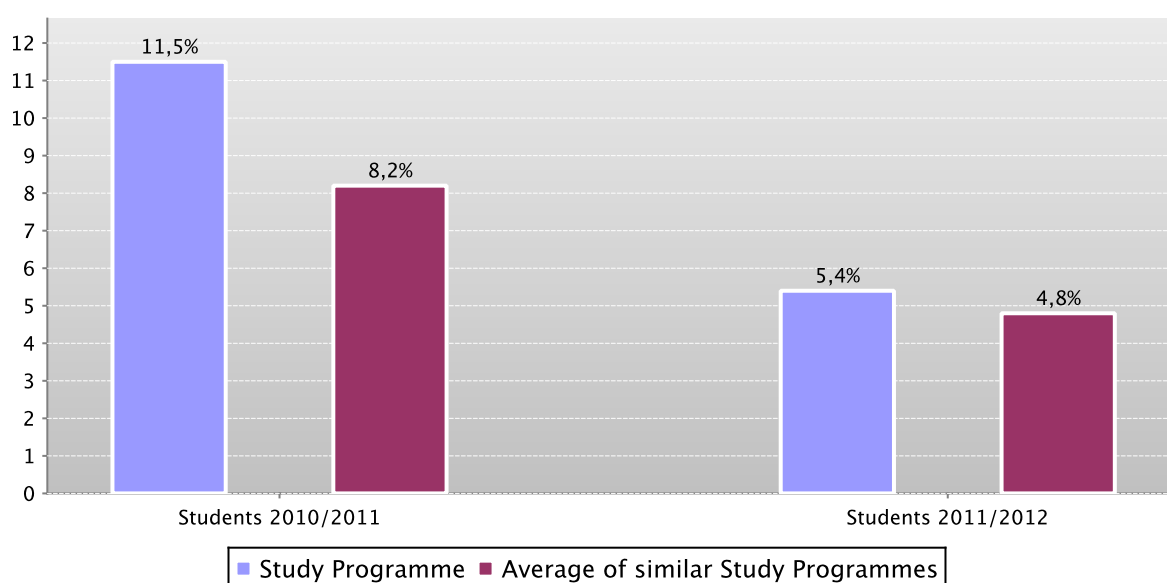
Here the number of students leaving the Study Programme is shown.

The **graph** shows the percentage of students who leave the programme after the first year compared to the average of similar Study Programmes (belonging to the same group).

The **table** shows the registered students, the percentage of students leaving the programme who pass to a different Study Programme in the same university, transfer to another university or withdraw from studies, as well as the enrolled repeating students and those enrolled in the second year.

The Study Programme data is compared with the average of similar Study Programmes (which belong to the same group), for students registered in the indicated academic years.

Percentage of withdrawals between years 1 and 2



		Registered students	% withdrawals	% passages and transfers	% repeating students	Students enrolled in the second year
Students 2010/2011	Study Programme	113	11,5%	15,9%	0,0%	82
	Average of similar Study Programmes	122,2	8,2%	13,6%	0,0%	95,5
Students 2011/2012	Study Programme	93	5,4%	23,7%	0,0%	66
	Average of similar Study Programmes	111,7	4,8%	11,9%	0,0%	93

See data of previous academic years – Study Programme D.M. 509/99 Chemistry and Pharmaceutical Technologies (code 0038) paragraph D.5.2.1.

## D.2.2. REGULAR GRADUATES

The new Study Programme running in compliance with D.M. 270/04 has not produced any graduates yet.

See data of previous academic years – Study Programme D.M. 509/99 Chemistry and Pharmaceutical Technologies (code 0038) paragraph D.5.2.2.

## D.2.3. ADDITIONAL DATA ON REGULARITY OF STUDIES

### D.2.3.1. CREDITS OBTAINED BY STUDENTS IN THE 1ST YEAR

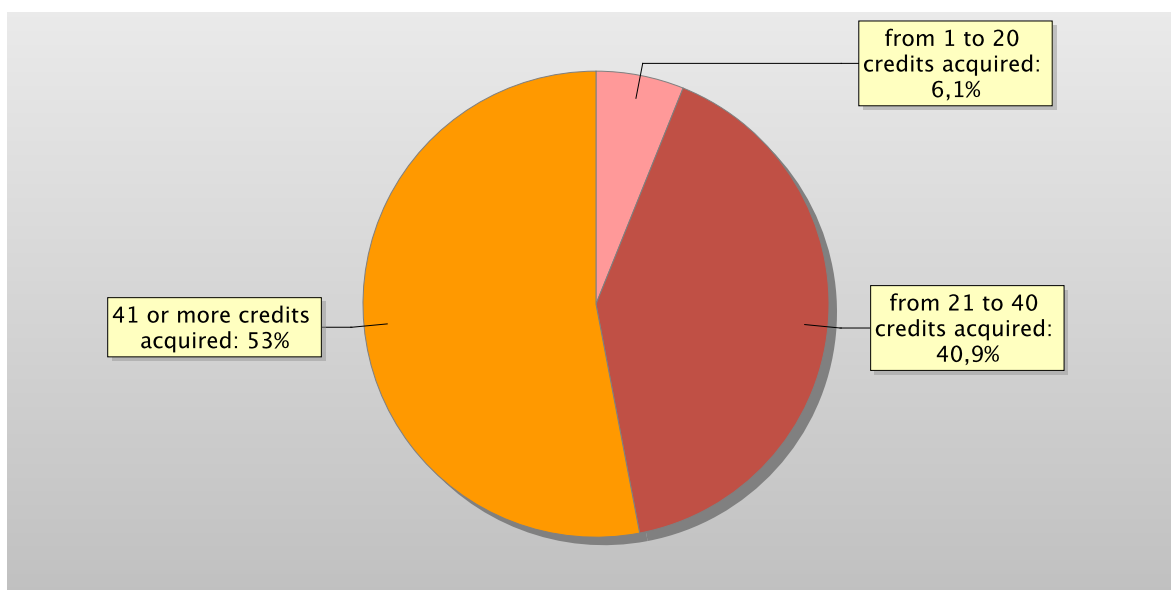
This offers an insight into how regularly students pass their exams.

The **graph** shows the distribution of the students according to the number of **credits** obtained at the end of the first year.

In addition, the **table** shows the number of students registered at the second year and average **credits** obtained during the first year.

The Study Programme data is compared with the **average of similar Study Programmes (which belong to the same group)**, for students registered in the indicated academic years.

Distribution of the students in 2011/2012 according to the number of credits obtained at the end of the first year\*



		Students enrolled in the 2nd year	% students with *				Average credits per student
			0 credits acquired	from 1 to 20 credits acquired	from 21 to 40 credits acquired	41 or more credits acquired	
Students 2010/2011	Study Programme	82	4,9%	7,3%	45,1%	42,7%	35,3
	Average of similar Study Programmes	95,5	1,4%	7,7%	33,3%	57,6%	41,1
Students 2011/2012	Study Programme	66		6,1%	40,9%	53,0%	39,6
	Average of similar Study Programmes	93	0,7%	9,5%	24,9%	64,9%	42,9

\*Note: by convention, credits are considered to be obtained by students by 31st October of the year following the year of enrolment. See data of previous academic years – Study Programme D.M. 509/99 Chemistry and Pharmaceutical Technologies (code 0038) paragraph D.5.2.3.1.



**D.2.3.2. EXAMS PASSED AND AVERAGE GRADE**

The **table** shows number of exams passed and average grade achieved for each course unit in the calendar year 2011. Marks for the exams passed are expressed out of thirty.

The data refers to the course unit code and therefore includes the various branches of the programme divided into channels or sub-groups, divided by letter.

It considers all subjects for which a grade is assigned, and therefore excludes all those to which a pass/fail score is allocated.

Data of the Study Programme D.M. 270/04 *Chimica e tecnologia farmaceutiche* (code 8412)

	N. of exams passed	Average grade *
00090 CHIMICA ANALITICA	50	25,8
00122 CHIMICA FISICA	16	25,2
00130 CHIMICA GENERALE ED INORGANICA	98	26,5
00150 CHIMICA ORGANICA I	105	25,5
00152 CHIMICA ORGANICA II	50	25
00405 FISICA	100	25,8
00674 MATEMATICA	99	23,6
00714 MICROBIOLOGIA	50	23,3
12946 BIOLOGIA MOLECOLARE	1	
18039 CARATTERIZZAZIONE STRUTTURALE DI COMPOSTI ORGANICI	36	25,3
37176 BIOLOGIA ANIMALE, ANATOMIA UMANA (C.I.)	6	21,3
44113 BIOCHIMICA E BIOLOGIA MOLECOLARE	51	27,3
49754 BIOLOGIA VEGETALE CON ELEMENTI DI BOTANICA FARMACEUTICA	69	26,4
57359 ANALISI DEI MEDICINALI I	64	25,6
66117 ANATOMIA UMANA E BIOLOGIA ANIMALE	97	26,9

\* Note: no average grade is given if the number of exams passed is less than or equal to 5.

See data of Study Programme D.M. 509/99 Chemistry and Pharmaceutical Technologies (code 0038), [paragraph D.5.2.3.2.](#)

**D.3. OPINIONS OF GRADUATES AND ATTENDING STUDENTS**

*Opinions of graduates on the Study Programme.*

*Tables and graphs provide information on the number of graduates who expressed positive opinions on the Study Programme, focusing on opinions expressed by attending students on course units.*

**D.3.1. OPINION OF GRADUATES**

The new Study Programme running in compliance with D.M. 270/04 has not produced any graduates yet.

See data of previous academic years – Study Programme D.M. 509/99 Chemistry and Pharmaceutical Technologies (code 0038) [paragraph D.5.3.1.](#)

## D.3.2 ADDITIONAL DATA ON OPINIONS OF STUDENTS

### D.3.2.1. OPINION OF ATTENDING STUDENTS

The **graph** shows the percentage of attending students who responded positively to the question in the questionnaire: “Are you generally satisfied with this course unit?” in academic year 2011/2012.

The **table** also shows the number of completed questionnaires.

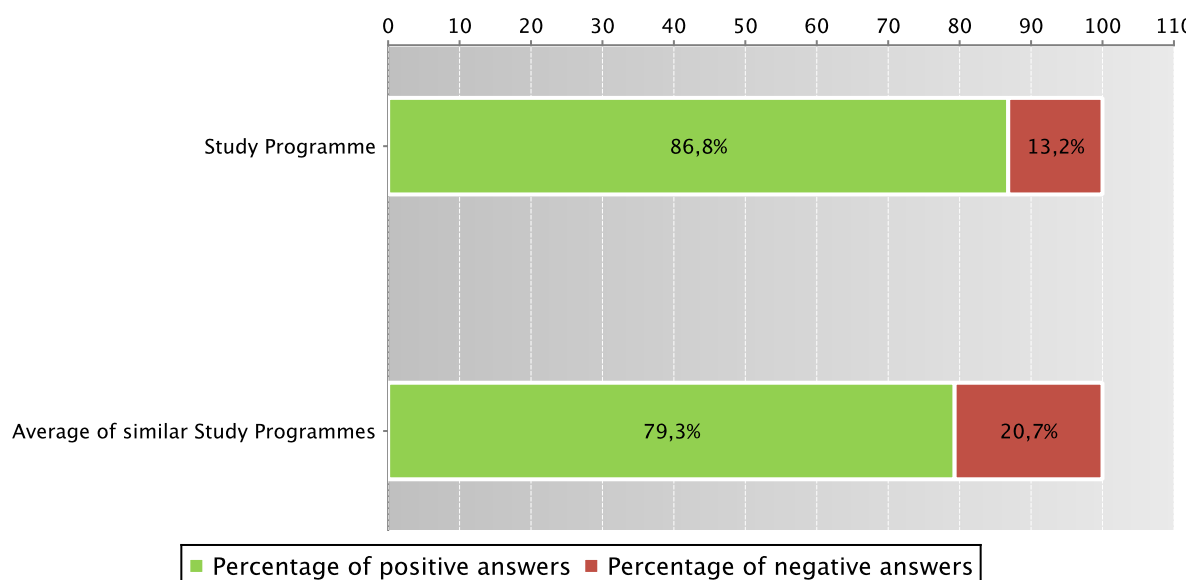
The Study Programme data is compared with the [average of similar Study Programmes \(which belong to the same group\)](#), for the indicated academic years.

The data concerning the students' opinion refers to the opinions of those attending lessons, whether they are enrolled in the current programme or a Study Programme running under pre-reform regulations (under D.M. 509).

For the University of Bologna the survey and subsequently analysis of the attending students opinion is cared by *Aform* - Quality Assurance Department and *Arag* - Support Planning and Evaluation Department. The overall results and the methods of collection and analysis are described in the document published online on the [Statistical Observatory of the University of Bologna](#) (see the note in the glossary).

Students who responded positively to the question: “Are you generally satisfied with this course unit?” in academic year 2011/2012

*Data of the Study Programme D.M. 270/04 Chimica e tecnologia farmaceutiche (code 8412) and of the Study Programme D.M. 509/99 Chimica e tecnologia farmaceutiche (code 0038)*



Data of the Study Programme D.M. 270/04 *Chimica e tecnologia farmaceutiche* (code 8412) and of the Study Programme D.M. 509/99 *Chimica e tecnologia farmaceutiche* (code 0038)

		Number of completed questionnaires	% of positive answers concerning the general satisfaction with the course unit – Question 19
a.y. 2009/2010	Study Programme	2993	78,9%
	Average of similar Study Programmes	3712,3	77,1%
a.y. 2010/2011	Study Programme	2436	84,1%
	Average of similar Study Programmes	4084	77,5%
a.y. 2011/2012	Study Programme	2345	86,8%
	Average of similar Study Programmes	4015,5	79,3%

Symbols:

(\*) When there is a small number of questionnaires, the percentage of positive opinions on overall satisfaction is not presented.

Further information on [Rapporto Opinione degli studenti frequentanti sulle attività didattiche](#) (the content is in Italian).

## D.4. ENTRY INTO THE WORLD OF WORK

*Employment situation of graduates of the Study Programme.*

*Tables and graphs provide information on the employment situation of graduates one year after graduating.*

### D.4.1. EMPLOYMENT SITUATION

Data of Employment situation of graduates of Study Programmes reformed in compliance with D.M. 270/04 have not been collected yet.

See data of previous academic years – Study Programme D.M. 509/99 Chemistry and Pharmaceutical Technologies (code 0038) [paragraph D.5.4.1.](#)

## D.5. INFORMATION ON PRE-REFORM PROGRAMMES (DM 509/99)

### D.5.1. STUDENTS STARTING THEIR UNIVERSITY CAREERS

*Characteristics of incoming students at the beginning of their university careers. Tables and graphs provide information on the number of registered students, focusing on the characteristics of the students, results of any entrance tests and students assigned additional learning requirements.*

#### D.5.1.1. ENROLMENTS AND REGISTRATIONS

Data of enrolments and registrations of the last three academic years are shown in [paragraph D.1.1.](#)

#### D.5.1.2. ADDITIONAL DATA ON STUDENTS' STARTING THEIR UNIVERSITY CAREERS

##### D.5.1.2.1. CANDIDATES REGISTERED FOR THE ENTRANCE EXAM

Data of candidates registered for the entrance exam are shown in [paragraph D.1.2.1.](#)

##### D.5.1.2.2. INCOMING STUDENTS

Data of incoming students of the last three academic years are shown in [paragraph D.1.2.2.](#)

## D.5.2. REGULARITY OF STUDIES

*Insight into the regularity with which the students pass their exams.*

*Graphs and tables provide information on the number of students who leave the programme after the first year and the number of regular graduates, focusing on the number of credits obtained at the end of the first year, the number of exams passed and the average grade achieved for each course unit.*

### D.5.2.1. STUDENTS LEAVING THE PROGRAMME BETWEEN YEARS 1 AND 2

Here the number of students leaving the Study Programme is shown.

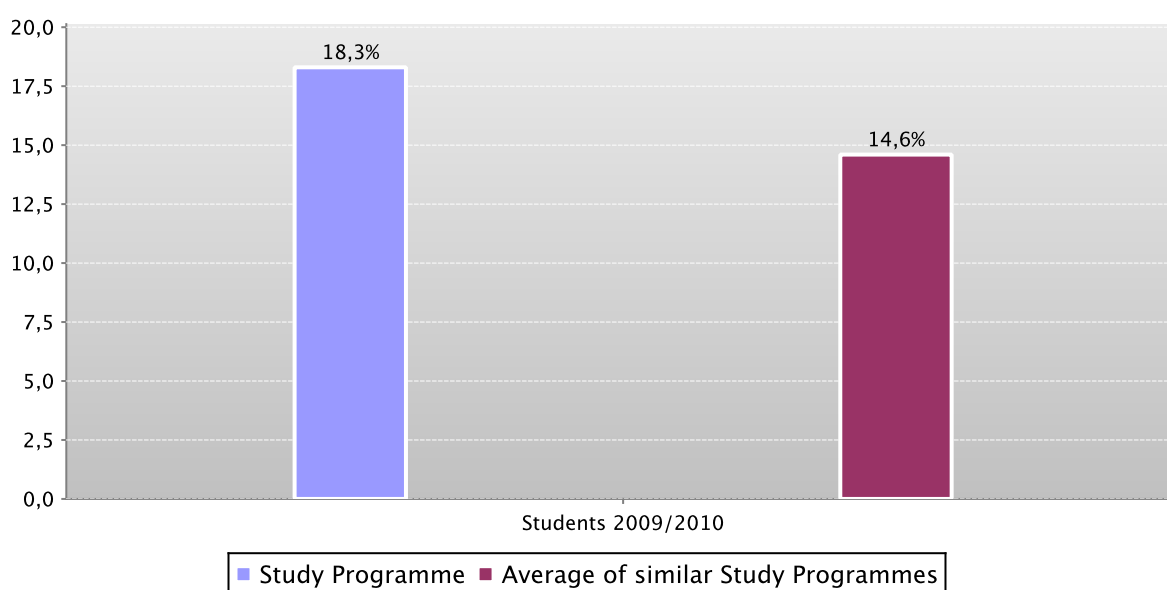
The **graph** shows the percentage of students who leave the programme after the first year compared to the average of **similar Study Programmes** (belonging to the same group).

The **table** shows the **registered students**, the percentage of students leaving the programme who **pass** to a different Study Programme in the same university, **transfer** to another university or **withdraw** from studies, as well as the enrolled **repeating** students and those enrolled in the second year.

The Study Programme data is compared with the average of **similar Study Programmes** of (which belong to the same group), for students registered in the indicated academic years.

Percentage of withdrawals between years 1 and 2

*Data of the Study Programme D.M. 509/99 Chemistry and Pharmaceutical Technologies (code 0038)*



*Data of the Study Programme D.M. 509/99 Chemistry and Pharmaceutical Technologies (code 0038)*

		Registered students	% withdrawals	% passages and transfers	% repeating students	Students enrolled in the second year
Students 2009/2010	Study Programme	230	18,3%	22,2%	0,0%	137
	Average of similar Study Programmes	211,3	14,6%	17,0%	0,1%	144,5

\*Note: From academic year 2009/2010 repeating students are deemed to be those who have not fulfilled the assigned OFA, therefore the data provided for a.y. 2009/2010 and followings cannot be compared to the previous years.

Go back to D.2.1. Students leaving the Study Programme between years 1 and 2

### D.5.2.2. REGULAR GRADUATES

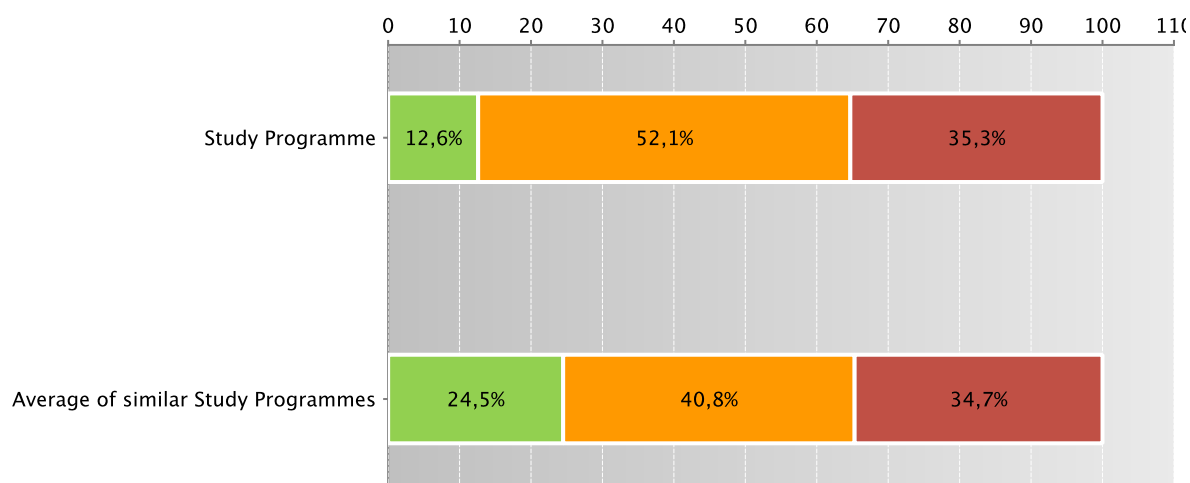
Here you will find information on regular graduates, on how many students, at the end of the regular programme duration, left the programme and how many are still enrolled but not aligned to the exam schedule.

The **graph** and the **table** show the situation concerning **registered students** for the indicated academic year, at the end of the regular duration of the Study Programme, highlighting the percentage of regular graduates, the number of students still enrolled (**not aligned to the exam schedule** and **repeating students**), students who have left the programme (including **passages, transfers and withdrawals**).

The Study Programme data is compared with the average of **similar Study Programmes (which belong to the same group)** for students registered in the indicated academic years.

Situation of students 2007/2008 at the end of regular duration of the study programme

Data of the Study Programme D.M. 509/99 Chemistry and Pharmaceutical Technologies (code 0038)



■ Graduates aligned with the exam schedule ■ Passages transfers and withdrawals  
 ■ Students still enrolled and not yet graduated

Data of the Study Programme D.M. 509/99 Chemistry and Pharmaceutical Technologies (code 0038)

		Regular graduates		Passages transfers and withdrawals		Students still enrolled and not yet graduated		
		N.	%	N.	%	N.	%	
Students 2005/2006	Study Programme	120	22	18,3%	54	45,0%	44	36,7%
	Average of similar Study Programmes	111,8	38,2	34,1%	31,8	28,5%	41,8	37,4%
Students 2006/2007	Study Programme	232	26	11,2%	108	46,6%	98	42,2%
	Average of similar Study Programmes	170,3	39,7	23,3%	64,7	38,0%	66	38,7%
Students 2007/2008	Study Programme	215	27	12,6%	112	52,1%	76	35,3%
	Average of similar Study Programmes	163,3	40	24,5%	66,7	40,8%	56,7	34,7%

Go back to [D.2.2. Regular graduates](#)

### D.5.2.3. ADDITIONAL DATA ON REGULARITY OF STUDIES

#### D.5.2.3.1. CREDITS OBTAINED BY STUDENTS IN THE 1ST YEAR

This offers an insight into how regularly students pass their exams.

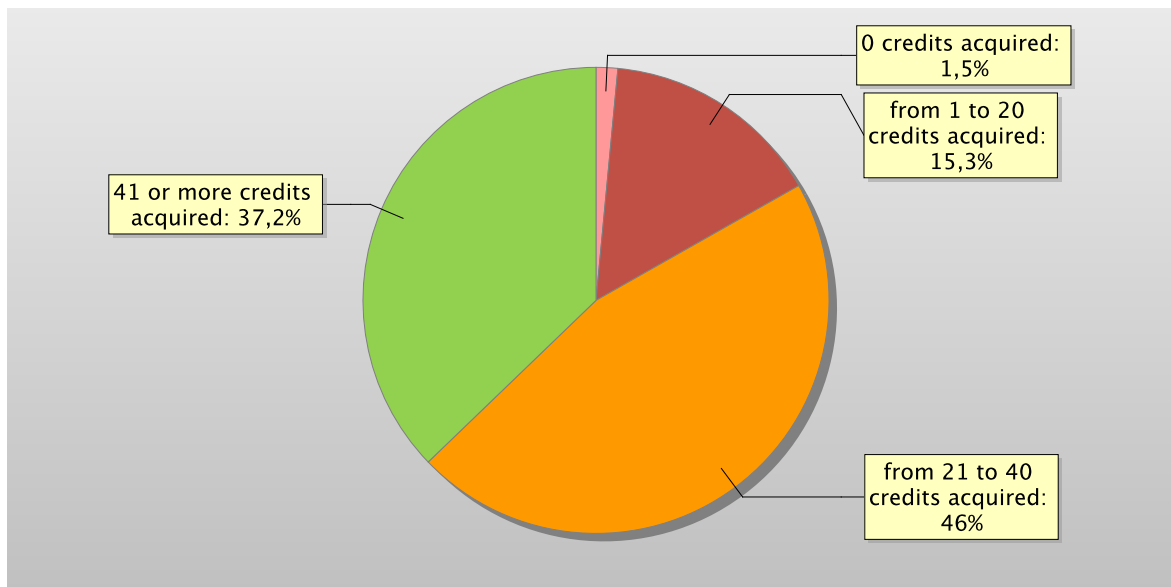
The **graph** shows the distribution of the students according to the number of **credits** obtained at the end of the first year.

In addition, the **table** shows the number of students enrolled in the second year and average number of **credits** obtained during the first year.

The Study Programme data is compared with the **average of similar Study Programmes** (which belong to the same group), for the indicated academic years.

Distribution of the students in 2009/2010 according to the number of credits obtained at the end of the first year\*

Data of the Study Programme D.M. 509/99 Chemistry and Pharmaceutical Technologies (code 0038)



Data of the Study Programme D.M. 509/99 Chemistry and Pharmaceutical Technologies (code 0038)

	Study Programme	Students enrolled in the 2nd year	% students with *				Average credits per student
			0 credits acquired	from 1 to 20 credits acquired	from 21 to 40 credits acquired	41 or more credits acquired	
Students 2009/2010		137	1,5%	15,3%	46,0%	37,2%	33,9
	Average of similar Study Programmes	144,5	2,4%	11,9%	33,1%	52,6%	39,6

\*Note: by convention, credits are considered to be obtained by students by 31st October of the year following the year of enrolment.

Go back to [D.2.3.1. Credits obtained by students in the 1st year](#)

**D.5.2.3.2. EXAMS PASSED AND AVERAGE GRADE**

The **table** shows number of exams passed and average grade achieved for each course unit in the calendar year 2011. Marks for the exams passed are expressed out of thirty.

The data refers to the course unit code and therefore includes the various branches of the programme divided into channels or sub-groups, divided by letter.

It considers all subjects for which a grade is assigned, and therefore excludes all those to which a pass/fail score is allocated.

Data of the Study Programme D.M. 509/99 *Chimica e tecnologia farmaceutiche (code 0038)*

	N. of exams passed	Average grade *
00061 BIOCHIMICA	43	24,6
00062 BIOCHIMICA APPLICATA	88	27,3
00090 CHIMICA ANALITICA	35	26
00119 CHIMICA FARMACEUTICA APPLICATA	112	27,1
00122 CHIMICA FISICA	91	24,1
00126 CHIMICA FARMACEUTICA E TOSSICOLOGICA I	102	25,7
00130 CHIMICA GENERALE ED INORGANICA	1	
00150 CHIMICA ORGANICA I	11	22,5
00152 CHIMICA ORGANICA II	37	23
00405 FISICA	21	23,6
00674 MATEMATICA	1	
00714 MICROBIOLOGIA	111	22,8
03033 TOSSICOLOGIA	109	26,3
03879 MICROBIOLOGIA INDUSTRIALE FARMACEUTICA	15	29,2
03915 CHIMICA DEI PRODOTTI COSMETICI	1	
05181 FISILOGIA	98	26,4
10083 ANATOMIA UMANA	5	
11268 CHIMICA ANALITICA DEGLI INQUINANTI	19	28,2
11438 ANALISI DEI MEDICINALI II	98	26,5
11777 CHIMICA FARMACEUTICA E TOSSICOLOGICA II	91	25,2
11967 TOSSICOLOGIA APPLICATA	19	26,6
12818 BIOLOGIA VEGETALE	1	
12946 BIOLOGIA MOLECOLARE	98	21,7
13120 FARMACOLOGIA APPLICATA	9	27,7
13272 ANALISI DEI FARMACI	116	27,4
13880 FARMACOLOGIA E FARMACOTERAPIA	134	25,5
16197 TECNOLOGIA, SOCIO-ECONOMIA E LEGISLAZIONE FARMACEUTICHE I	121	26
16198 TECNOLOGIA, SOCIO-ECONOMIA E LEGISLAZIONE FARMACEUTICHE II	90	26,4
18039 CARATTERIZZAZIONE STRUTTURALE DI COMPOSTI ORGANICI	78	23
18040 FARMACOLOGIA GENERALE E FARMACOGNOSIA	97	27,4
18041 PATOLOGIA GENERALE E MOLECOLARE	107	26
18044 SOCIO-ECONOMIA E BREVETTISTICA FARMACEUTICHE	5	
24720 CHIMICA FARMACEUTICA MOLECOLARE	31	28,9
24721 METODOLOGIE COMPUTAZIONALI INNOVATIVE NELLA PROGETTAZIONE DI FARMACI	14	28,3

	N. of exams passed	Average grade *
35899 METODI INNOVATIVI DELLA CHIMICA ORGANICA NELLO STUDIO DEL FARMACO	12	29,8
47946 NEUROFISIOLOGIA COGNITIVA	55	29,1
47955 CHIMICA DEI RADICALI LIBERI E DEGLI ANTIOSSIDANTI	1	
47959 METODOLOGIE ANALITICHE NELLO STUDIO DELL'INTERAZIONE FARMACO-PROTEINA BERSAGLIO	20	28
47965 METODOLOGIE AVANZATE PER LA SINTESI DI FARMACI	17	29,3
47967 ANALISI CHIMICO TOSSICOLOGICA E MONITORAGGIO CLINICO DEI FARMACI	30	28,1
47970 FORMULAZIONE INDUSTRIALE DEI MEDICINALI	11	30
47971 CONTROLLI TECNOLOGICI DEI MEDICINALI	12	28,8
49754 BIOLOGIA VEGETALE CON ELEMENTI DI BOTANICA FARMACEUTICA	11	23,8
52097 LABORATORIO DI PREPARAZIONE ESTRATTIVA E SINTETICA DEI FARMACI	99	27,4
57359 ANALISI DEI MEDICINALI I	20	23,2
58699 MATEMATICA (8 CFU)	8	21,3
S0040 CREDITI NEL SETTORE CHIM/01	1	
S0047 CREDITI NEL SETTORE CHIM/08	1	
S0197 CREDITI NEL SETTORE L-LIN/07	1	

\*Note: no average grade is given if the number of exams passed is less than or equal to 5.

Go back to [D.2.3.2. Exams passed and average grade](#)



### D.5.3. OPINIONS OF ATTENDING STUDENTS AND GRADUATES

*Opinions of graduates on the Study Programme.*

*Tables and graphs provide information on the number of graduates who expressed positive opinions on the Study Programme, focusing on opinions expressed by attending students on course units.*

#### D.5.3.1. OPINION OF GRADUATES

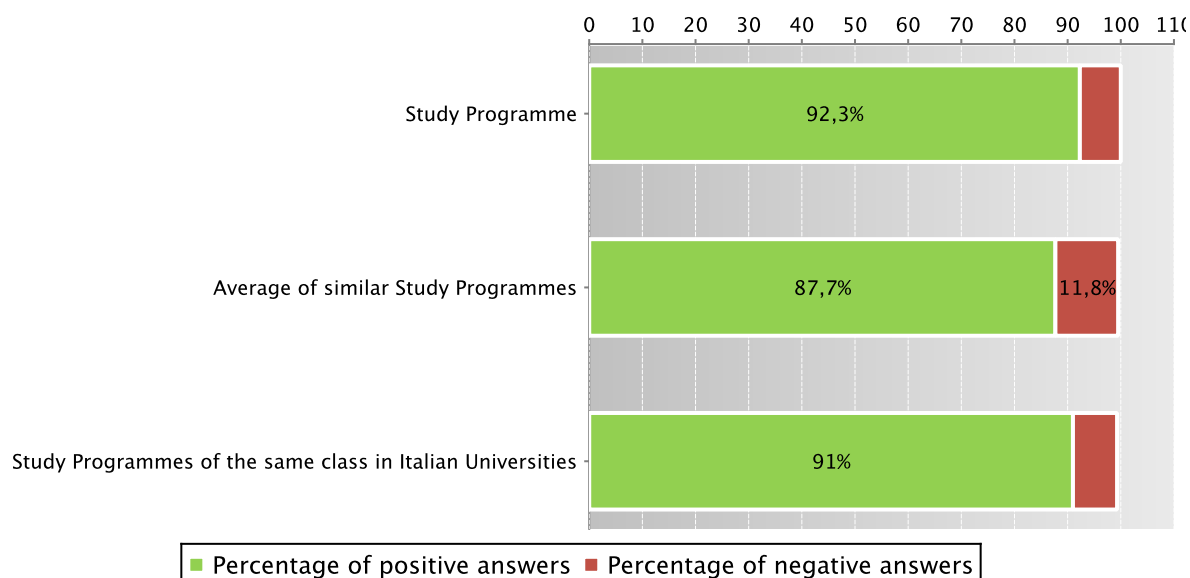
The **graph** shows the percentage of graduates (AlmaLaurea survey) who responded positively to the question: “**Are you generally satisfied with the Study Programme**”.

In addition, the **table** shows the percentage of students who answered “Yes, to the same programme at the university” to the question “Would you register again to the university?”.

The Study Programme data is compared with the **average of similar Study Programmes (which belong to the same group)**, for the indicated years.

Graduates in 2012 who responded positively to the question: “Are you generally satisfied with this Study Programme?”

*Data of the Study Programme D.M. 509/99 Chimica e tecnologia farmaceutiche (code 0038)*



		N. graduates	Completed Questionnaires	% of positive answers to the question: "Are you generally satisfied with this Study Programme?"	% of answers "yes to the same Programme in the same University" to the question "Would you register again to the University"
2010	Study Programme	82	81	98,8%	74,1%
	Average of similar Study Programmes	114,2	104,8	88,2%	78,4%
	Study Programmes of the same class in Italian Universities	2655	2486	92,8%	72,3%
2011	Study Programme	82	80	96,3%	80,0%
	Average of similar Study Programmes	107	97,3	90,4%	78,9%
	Study Programmes of the same class in Italian Universities	3220	3047	93,5%	73,5%
2012	Study Programme	91	91	92,3%	73,6%
	Average of similar Study Programmes	116	111	87,7%	74,6%
	Study Programmes of the same class in Italian Universities	3487	3269	91,0%	70,5%

Symbols:

(\*) The opinions of the Study Programmes with less than 5 graduates are not shown.

Further information on [Graduates' Profile Report](#).

Go back to [D.3.1. Opinion of graduates](#)

## D.5.3.2 ADDITIONAL DATA ON OPINIONS OF STUDENTS

### D.5.3.2.1. OPINION OF ATTENDING STUDENTS

Data of opinion of attending students of the last three academic years are shown in paragraph [D.3.2.1](#).

## D.5.4. ENTRY INTO THE WORLD OF WORK

*Employment situation of graduates of the Study Programme.*

*Tables and graphs provide information on the employment situation of graduates one year after graduating.*

### D.5.4.1. EMPLOYMENT SITUATION

The paragraph shows the employment situation of graduates one year after graduating.

The data is taken from the [AlmaLaurea](#) reports on the employment situation of graduates.

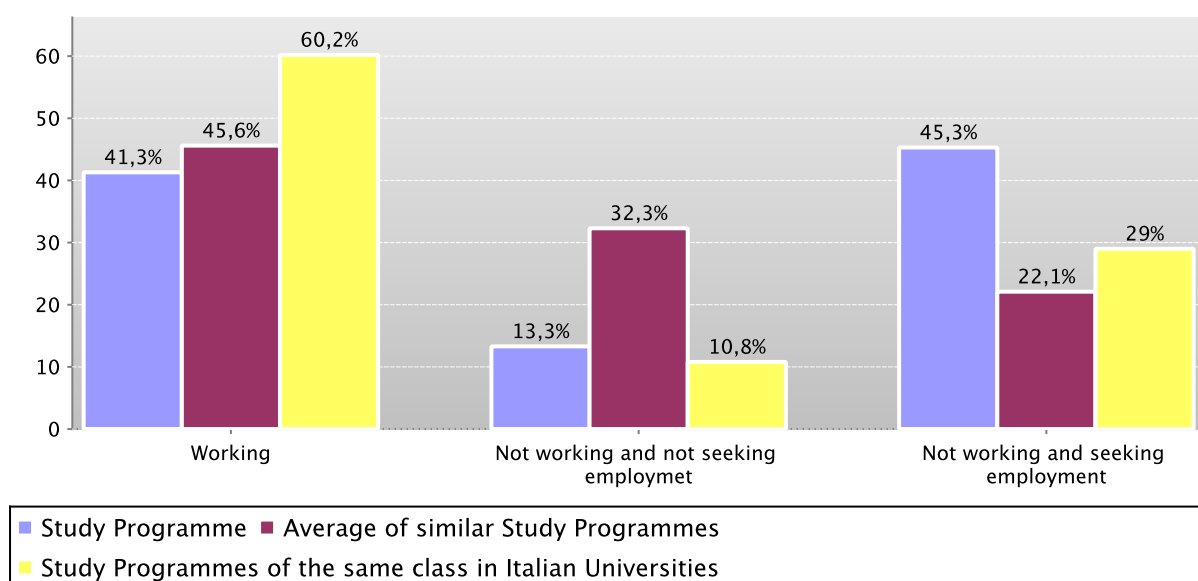
The **graph** shows who is working, who is not working and is not seeking employment, who is not working but is seeking employment.

In addition, the **table** shows the number of graduates interviewed, the number involved in internships and traineeships and the appropriateness of their degree to the job.

The Study Programme data is compared with the [average of similar Study Programmes \(which belong to the same group\)](#) and the average of Study Programmes of the same [class](#) of other Italian universities for the graduates of the indicated years.

Employment situation of graduates in 2011 one year after graduating

*Data of the Study Programme D.M. 509/99 Chemistry and Pharmaceutical Technologies (code 0038)*



		N. graduates interviewed	Employment situation (1)			Not working, not seeking employment, but following a university programme/traineeship (2)	Degree's appropriateness for the job (referred to the graduates who just work) (3)	
			Working	Not working and not seeking employment	Not working and seeking employment		Effective / very effective	Quite effective
Graduation Year 2009	Study Programme	69	46,4%	26,1%	27,5%	11,6%	90,6%	3,1%
	Average of similar Study Programmes	88,5	47,1%	32,6%	20,3%	19,2%	93,5%	2,4%
	Study Programmes of the same class in Italian Universities	2309	65,7%	13,4%	20,9%	7,7%	93,4%	3,8%
Graduation Year 2010	Study Programme	75	46,7%	20,0%	33,3%	9,3%	65,7%	20,0%
	Average of similar Study Programmes	99,3	43,3%	37,2%	19,5%	19,6%	84,5%	6,6%
	Study Programmes of the same class in Italian Universities	2461	62,9%	11,9%	25,2%	6,8%	92,8%	4,2%
Graduation Year 2011	Study Programme	75	41,3%	13,3%	45,3%	6,7%	67,7%	25,8%
	Average of similar Study Programmes	89,2	45,6%	32,3%	22,1%	19,8%	89,3%	5,8%
	Study Programmes of the same class in Italian Universities	2708	60,2%	10,8%	29,0%	5,8%	88,0%	8,0%

Symbols:

(\*) The opinions of the Study Programmes with less than 5 graduates are not shown.

### Notes on the AlmaLaurea report on the employment situation of graduates

(1) "Employment situation": the definition includes the number of employed graduates who declaring to carry out a paid work activity, provided that is not training activity (internship, traineeship, PhD degrees, specialization schools).

(2) "Number of those who do not work, who are not seeking employment but who are following a university programme/traineeship": the definition includes those who are enrolled in traineeships, PhD degrees, specialisation schools, Italian "master universitari" (first and second level). The presentation of this data complies with article 2 of D.M. 544 of 31st October 2007, as later provided for in Management Decree no. 61 of 10th June 2008 (transparency requirements).

(3) The evaluation of the appropriateness of the degree is obtained by a combination of the requirement of the relative qualification for the job held and the level of usage of the skills learned at university.

Further information on [Graduates' Employment report](#).

Go back to [D.4.1. Employment situation](#)

## E. FIND OUT MORE: THE QUALITY OF YOUR STUDY PROGRAMME

The University of Bologna has identified its objectives as the *personal, cultural and professional growth of students and the improvement of the quality of learning, also in relation to the needs of society* (Strategic Plan 2010-2013).

Students, employers and society as a whole, have the right to effective learning for individual and intellectual growth, to develop critical sense and to prepare for the world of work.

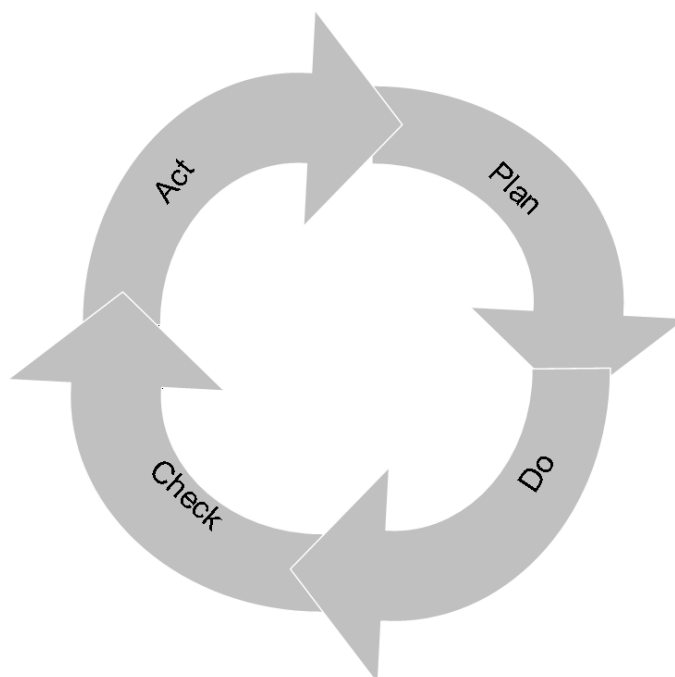
In the Statute and the Strategic Plan 2010-2013 the University of Bologna acknowledges its responsibility in guaranteeing the quality of its study programmes, and for this purpose adopts an "internal quality assurance system".

### The Internal Quality Assurance system

The internal quality assurance system is a set of processes and responsibilities adopted to guarantee the quality of Study Programmes at the University of Bologna.

The guarantee of the quality of a Study Programme is the correspondence of the results achieved with the set objectives, in the following phases:

- Plan: defining the objectives
- Do: implementing the planned actions
- Check: checking that the objectives have been achieved
- Act: planning improvement action



This path responds to the expectations of students, guides teaching behaviour and provides indicators for the assessment of results. Self-assessment is based on the analysis of significant data (for example, the number of students graduating in line with the exam schedule, students' opinions and the employment rates of graduates) and highlights strengths and weaknesses in order to reflect on the achieved results, critically consider one's own working methods and take steps for the continual improvement of the Programme. This path involves all educational stakeholders, including students, in order to make use of the contributions of everyone with first-hand knowledge of the Study Programme. Improvement is therefore a day to day development, concerning all aspects of teaching: from the lesson timetable to the publication of on-line programmes, from classroom management to exam methods, and the actual design of the Programme.

This is what happens in each phase:

- **Planning:** the Study Programme is the result of a proposal from the teaching structures and approved by the Academic Bodies.
- **Management:** Schools, Departments and Study Programmes manage the activities required to ensure teaching. The activities are organised as follows:

What we do	Who does what				
	Professors	Study Programme	Schools	Departments	General Administration
Teaching calendar, lessons programme and exam schedules			x		
Management of financial resources			x	x	
Classroom teaching	x				
Management of classrooms and laboratories			x	x	
Libraries and study rooms			x	x	
Approval of individual study plans		x			
Communication and information		x	x		Academic Affairs Division
Guidance service		x	x		Academic Affairs Division
Internships		x	x		Academic Affairs Division
Administrative services: Student Administration Office					Academic Affairs Division
Administration services: Degree programme office			x		Academic Affairs Division
Study grants and loans ad honorem					Academic Affairs Division
Student mobility: university subsidies and programmes					International Relations Division
Mobility: study grants for dissertations abroad			x		
Mobility: authorisations and recognitions		x			
Other students support services		x	x		x

- Internal assessment:** every Study Programme periodically assesses its own results, evaluating, for example, the number of enrolled students, the number of withdrawing students, student opinions etc.; in this way, the strengths and weaknesses, as well as any implemented improvement actions, are highlighted. This phase is organised as follows:

What we do	Who does what
<p><b>Definition, gathering and publication of evaluation data</b></p> <p>According to the general guidelines of the University and national and international standards, are defined the tools through which should be evaluated the results (indicators). The survey data to be evaluate are published every year on the Report of the Study Program.</p>	Academic Bodies
<p><b>Self-Assessment</b></p> <p>The Schools and Study Programmes assess the effectiveness of the previously adopted solutions, analyse the progress of their learning activities and draw up proposals for improvement.</p>	Schools and Study Programmes
<p><b>Internal audit</b></p> <p>The results of the self-assessment process are reviewed in the following phases:</p> <ul style="list-style-type: none"><li>• Analysis: the University Quality Manager analyses the review documents, considering the ability to identify problems, propose solutions and the overall development of the internal quality assurance system.</li><li>• Review: The observations on the results obtained and the good practices adopted are examined together with the persons in charge of the Schools and Study Programmes in meetings organised by scientific-disciplinary field. The persons in charge receive the observations and inputs on the areas for development and the actions to be adopted in future to improve results.</li><li>• Sharing: the conclusions of the review activities are submitted to the Academic Bodies and the University Evaluation Board.</li></ul>	Quality Manager Vice Rector for Teaching and Education Academic Bodies
<ul style="list-style-type: none"><li>• <b>Improvement:</b> on the basis of the results of the internal audit, the Schools and Study Programmes plan improvement activities, to ensure that the Study Programmes increasingly respond to the needs of society. The cycle then starts over again, with the definition of actions to be implemented, the results of which are in turn verified, in a continuous path that guarantees the quality of education.</li></ul>	

## F. GLOSSARY TERMS

### Additional Learning Requirements

Students enrolling in the first year of a first cycle or single cycle degree and who, following the results of the entrance exams established for each study programme, do not possess the knowledge required for access to the programme, are assigned additional learning requirements (OFA).

The OFA are fulfilled by passing an assessment test defined by the programme.

The non-fulfilment of the requirements by the date set by the Academic Bodies and published on the University Portal will lead to the re-enrolment in the first year of the programme.

### AlmaLaurea

AlmaLaurea is an innovative in-line database service of graduates' curriculum vitae (1,620,000 CVs, from 53 Italian universities as of 05/07/2012), which offers a link between graduates, universities and businesses.

Created in 1994 on the initiative of the Statistical Observatory of the University of Bologna, managed by a consortium of Italian universities with the support of the Ministry of Education, University and Research, the purpose AlmaLaurea is to act as a point of contact between businesses and graduates, a reference within universities for anyone (students, businesses, etc...) working in the field of university studies, employment and the condition of young people at different levels.

### Average of similar study programmes (belonging to the same group)

Average of the Study Programmes (which belong to the subject group)

Calculated average which refers to all study programmes of the same cycle which belong to the subject group.

There are four groups, composed as follows:

- **BIOMEDICAL group:** Study Programmes of the Schools of Pharmacy, Biotechnology and Sport Science; Medicine; Agriculture and Veterinary Medicine
- **SCIENTIFIC-TECHNOLOGICAL group:** Study Programmes of the Schools of Engineering and Architecture; Sciences
- **SOCIAL SCIENCES group:** Study Programmes of the Schools of Economics, Management, and Statistics; Law, Political Sciences
- **HUMANITIES group:** Study Programmes of the Schools of Arts, Humanities, and Cultural Heritage; Foreign Languages and Literatures, Interpreting and Translation; Psychology and Education

### CFU University Learning Credits

University Learning Credits (CFU) were introduced under Italian Ministerial Decree no. 509/99 to comply with European legislation, and are a measurement of the volume of learning, including individual study, required of students; generally 1 CFU corresponds to 25 hours of a student's "overall learning effort".

### Class

Degree classes group together study programmes of the same level and with the same key learning outcomes and available learning activities for a given number of credits and in sectors which are identified as indispensable. The features of the classes are set nationally, by Ministerial Decree, and are therefore common to all universities.

### Cohort

Cohort refers to a group of students enrolled in the same academic year.

### Enrolment status

In terms of enrolment, students may be:

- **Regularly enrolled:** students enrolled for as many or fewer years than the legal duration of the study programme, who do not fall into any of the following categories;
- **Not aligned with the exam schedule:** students who, without having graduated, have enrolled in all the years of the study programme and which, for programmes with compulsory attendance, have obtained all attendance certificates;
- **Repeating:** students re-enrolling in the same year of a programme again. Starting from academic year 2009-2010, students who have not fulfilled the assigned additional learning requirements within the deadline have to enrol in the 1st year as repeating students.

### Entrance exam

Enrolment in a study programme may be free access or restricted access.



For all programmes with restricted access, candidates are required to sit an entrance exam and there are a limited number of places available. The entrance exam is a test which is used to draw up a graded list of candidates; students may enrol in the programme according to their place in the list. The methods of managing the call for applications and the list of candidates, including the methods for filling any unclaimed places, may vary from year to year. The test may be specific to a Degree Programme or may be part of a single exam covering several programmes from the same university or from other universities (during the registration the students should indicate their first choice).

The following definitions apply:

**Available places** = the number of places laid down in the call for applications to the Study Programme, or determined by subsequent legal provisions; these exclude any additional places reserved according to special provisions of the programme (e.g. for international study programmes, they do not include places for foreign students selected from other universities; for all programmes with restricted access regulated nationally, these do not include the places reserved for transferring students).

**Number of candidates for the exam** = number of students registered for the exam indicating the study programme as their first choice;

**Number of participants in the exam** = number of students participating in the exam indicating the study programme as their first choice;

**Number of participants in the exam for every available place** = number of students participating in the exam who indicated the study programme as their first choice as a ratio of the number of places available on the programme.

#### First year enrolments

This includes all students enrolled in the first year, including those joining the study programme in its first year through transferrals, as well as those enrolled in the first year but not for the first time (e.g. repeating students).

#### New Careers

Students who start a new university career (excluding transfers) from year one in a second cycle programme.

#### Passages and transfers

**Passage:** when a student applies to move to a different study programme from the one enrolled in the previous year, within the same university.

**Transfer:** when a student transfers from a study programme in one university to any programme in another university.

#### Registered students

Students who begin a career in the Italian University System for the first time and who enrol in the first year (i.e. for whom no previous university careers are recorded) of a First Cycle (L509, L) or Single Cycle programme (LSCU, LMCU)

#### Statistical Observatory of the University of Bologna

The Statistical Observatory was founded in 1997 in order to “provide the university governing bodies with a reliable and timely documentary and monitoring database aiming to promote decision-making processes and planning, particularly of learning activities and other services targeting the student population” (art.1 of the Founding and Operational Regulation). Following the disabling of the Statistical Observatory, as resolved by the Board of Governors on 14 December 2010, from the second semester of academic year 2010-11 the survey and subsequently analysis of the attending students opinion is cared for the University of Bologna by Academic Affairs Division - Quality Assurance Department and Control and Finance Division - Support Planning and Evaluation Department. The overall results and the methods of collection and analysis are described in the document published online on the [Statistical Observatory of the University of Bologna](#).

#### University DataWarehouse

Information service for the managers of the University of Bologna organisational departments which gathers, integrates and reorganises data from various sources and makes it available for analysis and evaluation for the purposes of planning and decision-making.

#### Withdrawal

Suspension of studies by students who do not register in the next academic year, or who drop out from the degree programme.