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School of Agriculture and Veterinary Medicine – Cesena Campus  
LAUREA MAGISTRALE (SECOND  
CYCLE DEGREE/TWO YEAR MASTER  
- 120 ECTS) IN FOOD SCIENCE AND  
TECHNOLOGY A.Y. 2013/2014  
Programme Director Prof. Maria Caboni

REPORT

Study Programme Report  
Food Science and Technology  
Programme ex D.M. 270/04 - Code 8531 - Class LM-70  
School of Agriculture and Veterinary Medicine – Cesena Campus  
Programme Director Prof. Maria Caboni

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# INDICE

<b>What is the Study Programme Report?</b> .....	1
<b>A. Presentation and prospects</b> .....	2
A.1. Presentation .....	2
A.2. Admission requirements .....	2
A.3. Learning outcomes .....	2
A.4. Career opportunities .....	4
A.5. Opinion of social partners and potential employers .....	5
A.6. Further studies .....	5
<b>B. Teaching and Learning</b> .....	6
B.1. Course Structure Diagram .....	6
B.2. Calendar and lecture timetable .....	6
<b>C. Resources and services</b> .....	7
C.1. Teachers .....	7
C.2. Student services: offices .....	7
C.2.1. Future students .....	7
C.2.2. Enrolled students .....	7
C.2.3. International students .....	7
C.2.4. Graduates .....	7
<b>D. The Study Programme in figures</b> .....	8
D.1. Students starting their university careers .....	8
D.1.1. Enrolments .....	8
D.1.2. Additional data on students' starting their university careers .....	10
D.1.2.1. Candidates registered for the entrance exam .....	10
D.1.2.2. Incoming students .....	10
D.2. Regularity of studies .....	12
D.2.1. Students leaving the Programme between years 1 and 2 .....	12
D.2.2. Regular graduates .....	14
D.2.3. Additional data on regularity of studies .....	15
D.2.3.1. Credits obtained by students in the 1st year .....	15
D.2.3.2. Exams passed and average grade .....	16
D.3. Opinions of graduates and attending students .....	18
D.3.1. Opinion of graduates .....	18
D.3.2. Additional data on opinions of students .....	20
D.3.2.1. Opinion of attending students .....	20
D.4. Entry into the world of work .....	22
D.4.1. Employment situation .....	22
D.5. Information on pre-reform programmes (DM 509/99) .....	23
D.5.1. Students starting their university careers .....	23
D.5.1.1. Enrolments .....	23
D.5.1.2. Additional data on students' starting their university careers .....	24
D.5.1.2.1. Candidates registered for the entrance exam .....	24
D.5.1.2.2. Incoming students .....	24
D.5.2. Regularity of studies .....	24
D.5.2.1. Students leaving the Programme between years 1 and 2 .....	24
D.5.2.2. Regular graduates .....	24
D.5.2.3. Additional data on regularity of studies .....	24
D.5.2.3.1. Credits obtained by students in the 1st year .....	24
D.5.2.3.2. Exams passed and average grade .....	24
D.5.3. Opinions of attending students and graduates .....	24

D.5.3.1. Opinion of graduates .....	24
D.5.3.2 Additional data on opinions of students .....	24
D.5.3.2.1. Opinion of attending students .....	24
D.5.4. Entry into the world of work .....	25
D.5.4.1. Employment situation .....	25
<b>E. Find out more: the quality of your Study Programme .....</b>	<b>27</b>
<b>F. Glossary terms .....</b>	<b>30</b>

# 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 degree programme aims to produce second cycle degree graduates capable of carrying out activities related to planning, process management, innovation and development of food products employable in companies operating in the food sector (production, distribution, packaging, ingredients), public or private food control laboratories, technical and operational departments of public administrations and in public or private food research.

The aim is to provide students with the knowledge and competencies necessary to take the State Exam in order to work as FOOD TECHNOLOGIST as provided for by the regulations in force.

The aim of the programme is to provide graduates with advanced knowledge to investigate in depth topics related to the evaluation of the chemical, physical, nutritional and sensory quality of food products, control and management of production processes according to modern regulations and procedures in terms of quality, safety, business economics and marketing; to provide graduates with the competencies to rationally choose the most suitable processes and transformation phases for modern food production and/or supply of food.

This degree programme has a strong interdisciplinary approach to offer students the necessary competencies to tackle a sector like the food one, which is strongly multidisciplinary and very dynamic, and to produce qualified professionals and experts capable of operating in highly innovative and changeable contexts.

The course starts by studying in greater depth certain topics already studied at basic level in the three-year study programme related to the biological, technological, normative and nutritional aspects of food; the aim is to provide second cycle degree graduates with the knowledge and competencies to deal with product and process innovation, advanced research (with the possibility of going on to a PhD programme) and control of food quality thanks to the knowledge acquired of the analytical methods to study the chemical, physical, microbiological, nutritional and sensory properties of food also with a molecular analytical approach.

### A.2. ADMISSION REQUIREMENTS

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

This information is not available in English at this time.

### A.3. LEARNING OUTCOMES

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

#### KNOWLEDGE AND UNDERSTANDING ABILITY:

Second cycle degree graduates:

- Will have solid training and good mastery of the scientific method so as to be able to optimise and manage industrial and research projects concerning the entire food production chain.
- Will have in-depth knowledge of food chemistry and of the molecular structure for the control of reactions in food during processing and storage.
- Will have an understanding of the fundamental principles and analytical techniques also advanced ones related to food.
- Will have an understanding of the role and meaning of microbial inactivation using fermentation processes.
- Will have an understanding of the role of nutrients in human health and of the impact of food on the nutritional status as well as the influence of transformation processes on the retention of nutritional properties.
- Will have an understanding of the sources and variability of food and their impact on transformation operations, and will have knowledge of food alteration and deterioration mechanisms and methods to control them and of innovations in the production of raw material of vegetable and animal origin .
- Will have an understanding of unit operations required to produce a certain type of food product and of the principles that make food safe for consumption .
- Will have an understanding of current process technologies and of the effects of process parameters on product quality.
- Will have knowledge of packaging techniques from a technical and marketing point of view to study product innovation opportunities.
- Will have the ability to use computers and the knowledge of how computer means can be used to tackle issues related to food science.
- Will have knowledge of the fundamental principles of quality management systems and of obligatory and voluntary regulations for the modern application of self-control principles and quality management aimed at continuous improvement.

The knowledge and understanding abilities are achieved and developed through lectures, practical activities, seminars, supervised home study, and individual home study provided for by the programme course units.

Learning is assessed mainly through oral and written exams, tests and oral presentations supervised by the professor.

#### ABILITY TO APPLY KNOWLEDGE AND TO UNDERSTAND:

Second cycle degree graduates:

- Will have the ability to use laboratory techniques of basic and applied food chemistry.
- Will have the ability to select appropriate analytical techniques to solve a practical problem.
- Will be able to identify main food spoilage micro-organisms and pathogens and the conditions in which they may develop and will have the knowledge to apply laboratory techniques to identify micro-organisms in food.
- Will have the ability to identify the conditions, including sanitation techniques, in which the main pathogens and spoilage micro-organisms are inactivated, destroyed or rendered harmless.
- Will have the full ability to use mass and energy balances for a given food process (heating, evaporation, freezing, etc).
- Will have the ability to apply and evaluate the main process-product management standards of the agro-food sector (UNI EN ISO, EC regulations, large-scale distribution standards etc.) and related to food safety (food hygiene legislation).
- Will have in-depth knowledge of packaging related problems and will be able to identify suitable packaging systems.
- Will have the ability to apply basic and advanced statistical principles in the application of food sciences to control and ensure the quality of food products.

The ability to apply the knowledge and understanding is achieved through critical reflection on texts proposed for home study stimulated through classroom activities, study of research and application cases indicated by the professors, numerical and practical laboratory activities, field and computer activities, bibliographic research and on the field, individual and/or group projects related to the common curriculum course units or elective course units included in the programme, as well as during the preparation of the thesis. Assessment is through written and oral exams, reports and problem-solving activities which provide for specific tasks to assess command over instruments and methods, and critical autonomy.

#### JUDGEMENT SKILLS

Second cycle degree graduates:

- Will have the ability to analyse different production and market situations, plan actions and manage interventions to improve the quality and efficiency of production and any other related activity to guarantee environmental sustainability and eco-compatibility.
- Will have the ability to describe and measure in a detailed manner the main physical properties of food and experimentally evaluate their value.
- Will have in-depth knowledge of health risks related to chemical contaminants in food and of appropriate methods to reduce the risk.
- Will have the ability to make judgements in technical, economic, human and ethical terms.
- Will have the ability to carry out the necessary optimisation interventions in terms of choice of raw materials or semi-finished products.
- Will have the ability to evaluate the advanced and innovative engineering aspects of food machinery.
- Will have the ability to judge the operational conditions and actions needed in a specific context on the basis of information obtained from updated literature
- Will have the ability to plan, apply and statistically interpret valid sensory evaluation methods to assess food quality or consumer acceptability.
- Will understand the importance of government regulations on the production and sale of food products and will be able to precisely evaluate the performance of a process and the conformity of food with the laws and specifications.

Judgement skills are developed in particular through practical activities, seminars, papers and through the activities assigned by the thesis supervisor in preparation of the thesis.

The acquisition of judgement skills is assessed by evaluating the course units of the study programme; the capacity to make autonomous judgements and to work alone is assessed through the work carried out in preparation of the thesis.

#### COMMUNICATION SKILLS:

Second cycle degree graduates:

- Will have the ability to describe biochemical, chemical, physical and biological factors important for the synthesis and metabolism of food.
- Will have the ability to describe food preservation principles and methods.
- Will have the ability to communicate effectively with specialists to define a corporate marketing plan.
- Will have the ability to describe the characteristics and properties of food packaging materials and identify suitable packaging systems.
- Will have the ability to communicate, and work as part of a multidisciplinary group; will have the ability to work in a team, even as a leader and to use instruments and computers with expertise.
- Will have the ability to communicate orally and in writing in at least one foreign language of the European Union other than Italian, preferably English, as regards complex technical and scientific vocabulary related to subject areas of the degree programme.
- Will have the ability to communicate in a professional way with food engineering experts.

- Will have the ability to research case studies autonomously and to investigate them in depth by preparing short dissertations on specific aspects being analysed.
- Will be able to express in writing and discuss, within the context in which they operate, issues of interest related to the degree programme with good propriety of language and conciseness.

Written and oral communication skills are developed in particular through seminars, practical activities and course units that provide for the preparation of reports, written papers and their oral presentation, and also through the presentation of group activities concerning assigned market survey or product analysis projects. The evaluation/assessment of communication skills listed above is provided for also through the preparation of the thesis and its presentation.

#### LEARNING SKILLS:

Second cycle degree graduates:

- will have an understanding of transport, food transformation unit operations both theoretically and in laboratory conditions with the competence to assess the influence of operational conditions on transport.
- will be up-to-date on important topical matters concerning the food sector.
- Will have an understanding of the organisational logic of the food system and keep updated on recent developments.
- Will have cognitive instruments, logical elements and familiarity with new computer technology instruments that guarantee continuous updating of knowledge in a specific professional sector or scientific research area.
- Will have the learning ability to pursue further studies (PhD programme or 2nd level Professional Master's degree) with a high degree of autonomy.

The learning abilities acquired are a result of the entire period of study, in particular during home study, in the preparation of individual projects, in the preparation of the thesis and through all the in-depth home study of a topic such as the research work for the thesis.

Learning skills are continuously assessed during the course units and through the presentation of data collected autonomously, through projects and the evaluation of self-learning skills matured during the activity in preparation of the thesis. During the study programme the subdivision of the overall number of study hours into different categories offers students the possibility to continuously check and improve their learning skills. The work for the thesis has the same aims and contributes to developing these skills as students are asked to understand and tackle new information not necessarily provided by the thesis supervisor.

## A.4. CAREER OPPORTUNITIES

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

Second cycle degree graduates will be able to perform the following professional roles and functions in the areas of employment here indicated:

#### Food Technologist

(profession established by the ordinary law no. 59, 1994 and following applicative decrees with reference also to the memorandum of the Ministry of Health dated 6.12.2000 on the obligatoriness of the enrolment on the professional register)

Functions:

- Planning, management, control, coordination and training concerning production, preservation, distribution, supply, monitoring and analysis of food and drinks.
- Management of professional activities for the constant improvement of products in economic and qualitative terms, guaranteeing sustainability and eco-compatibility of industrial activities, implementing and proposing innovations for different professional activities of the sector.
- Link between different corporate functions with the task of anticipating the need for a product or process change.
- Cooperation in conceiving, planning, developing and launching traditional and innovative food products on the market.
- Communication and awareness-raising of consumers and other subjects.
- Implementation of regulations to company production processes.
- Production or plant manager or director with the capacity to cooperate with other functions not only by supplying technical information but also by discussing the corporate objectives.

Career opportunities:

- Food industries and companies operating in the food production, transformation, preservation and distribution sectors.
- Large-scale organised distribution companies.
- Manufacturers of rubber and plastic items (plastic and light metal packaging, non-metallic mineral processing by-products, hollow glass, machinery and plants, crockery, pans, vases, kitchen tools and home accessories, etc.).
- Manufacturers of machines for the food, drink and tobacco industry (including parts and accessories, installation, maintenance and repair).
- Public and private bodies involved in planning, analysis, control and certification and those involved in scientific investigations to safeguard and enhance food, training centres, in private practices and as freelance professionals.
- Bodies operating in the collection, purification and distribution of water.



- Wholesale sector (sales intermediaries for food, drinks, tobacco) and retail sector in non-specialist stores that store mainly food and drink.
- Hotels and restaurants.
- Experimental research and development sector in the field of natural sciences and engineering.
- Health services and social assistance (clinical analysis laboratories, hygiene and prophylaxis).

The degree programme project has been submitted to selected external stakeholders in order to receive their opinions and feedbacks on the learning outcomes and the professional profiles.

## 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

It gives access to third cycle studies (Dottorato di ricerca/Scuole di specializzazione) and master universitario di secondo livello.

## 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 and 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 (in Italian). Information updated to 28 May 2013 (in Italian).*

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

<a href="#">Bordoni, Alessandra</a>	<a href="#">Fabbri, Angelo</a>	<a href="#">Parpinello, Giuseppina Paola</a>	<a href="#">Rodriguez Estrada, Maria Teresa</a>
<a href="#">Caboni, Maria</a>	<a href="#">Folchi, Annibale</a>	<a href="#">Petracci, Massimiliano</a>	
<a href="#">Camanzi, Luca</a>	<a href="#">Gardini, Fausto</a>	<a href="#">Pinnavaia, Giangaetano</a>	<a href="#">Romani, Santina</a>
<a href="#">Capozzi, Francesco</a>	<a href="#">Lanciotti, Rosalba</a>	<a href="#">Ragni, Luigi</a>	<a href="#">Versari, Andrea</a>
<a href="#">Dalla Rosa, Marco</a>	<a href="#">Malorgio, Giulio</a>	<a href="#">Riponi, Claudio</a>	<a href="#">Viaggi, Davide</a>
<a href="#">D'Antuono, Luigi Filippo</a>	<a href="#">Manfreda, Gerardo</a>	<a href="#">Rocculi, Pietro</a>	<a href="#">Zambonelli, Paolo</a>

### 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 links take you to the reference Work Placement and International Relations office for the Study Programme, where available.*

- [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 OEA, 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

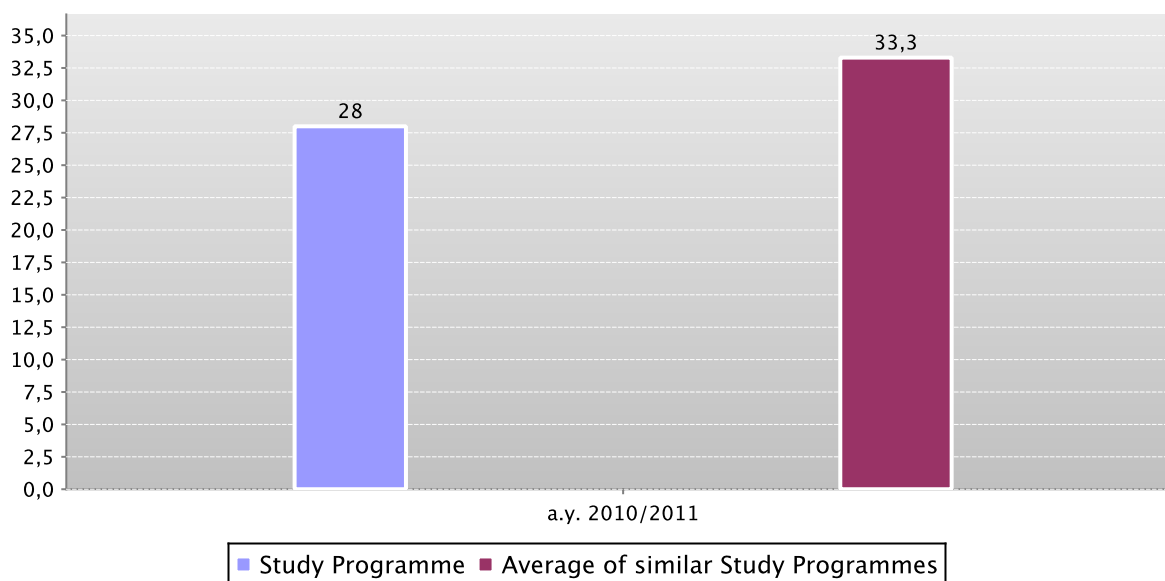
Characteristics of incoming students at the beginning of their study. Tables and graphs provide information on number of enrolled students (*new careers*), focusing on the characteristics of students and results of any entrance tests.

#### D.1.1. ENROLMENTS

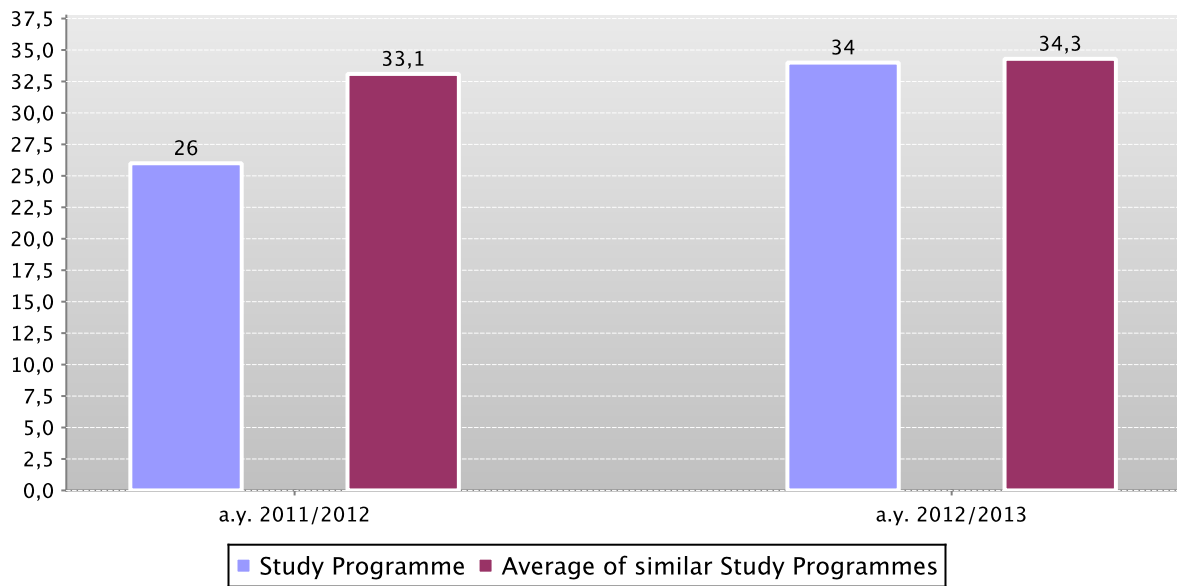
The **graph** and the **table** show the number of **new careers** of the Study Programme compared with the **average of similar Study Programmes** (which belong to the same group), for the indicated academic years.

New careers

Data of the Study Programme D.M. 270/04 Food Science and Technology (code 0879)



Data of the Study Programme D.M. 270/04 Food Science and Technology (code 8531)



Data of the Study Programme D.M. 270/04 Food Science and Technology (code 0879)

	a.y. 2010/2011	
	New careers	Total N. enrolled students
Study Programme	28	48
Average of similar Study Programmes	33,3	39,7

Data of the Study Programme D.M. 270/04 Food Science and Technology (code 8531)

	a.y. 2011/2012		a.y. 2012/2013	
	New careers	Total N. enrolled students	New careers	Total N. enrolled students
Study Programme	26	56	34	77
Average of similar Study Programmes	33,1	43,4	34,3	49,1

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

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

In academic year 2012/2013 access to this Study Programme was not restricted.

### D.1.2.2. INCOMING STUDENTS

Geographic origin, type of 1st cycle degree, age and gender of students.

The 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 1st cycle degree 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.

Data of the Study Programme D.M. 270/04 Food Science and Technology (code 0879)

		New careers	Geographic origin						Gender		Average age of new career 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	Not available	M	F	22 or less	23 - 24	25 or more
Students 2010/2011	Study Programme	28	14,3%	28,6%		50,0%	7,1%		42,9%	57,1%	25,0%	64,3%	10,7%
	Average of similar Study Programmes	33,3	22,0%	15,8%	8,0%	49,1%	4,8%	0,2%	43,5%	56,5%	24,2%	46,3%	29,5%

		First Cycle Degree: University of previous studies				First Cycle Degree: more frequent class		First Cycle Degree: grade					
		University of Bologna	Other Italian Universities	Foreign University	Other not defined	Class code and name	% of students	First Cycle Degree grade between 66 and 90	First Cycle Degree grade between 91 and 100	First Cycle Degree grade between 101 and 105	First Cycle Degree grade between 106 and 110	First Cycle Degree grade 110 and honors	First Cycle Degree grade not available
Students 2010/2011	Study Programme	67,9%	32,1%			20 SCIENZE E TECNOLOGIE AGRARIE, AGROALIMENTARI E FORESTALI	82,1%	7,1%	28,6%	25,0%	17,9%	21,4%	
	Average of similar Study Programmes	64,1%	25,1%	3,4%	7,4%	33 SCIENZE DELLE ATTIVITA MOTORIE E SPORTIVE	20,8%	7,4%	29,7%	24,2%	17,6%	12,6%	8,4%

Data of the Study Programme D.M. 270/04 Food Science and Technology (code 8531)

		New careers	Geographic origin					Gender		Average age of new career 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	22 or less	23 - 24	25 or more
Students 2011/2012	Study Programme	26	11,5%	30,8%	3,8%	50,0%	3,8%	42,3%	57,7%	30,8%	65,4%	3,8%
	Average of similar Study Programmes	33,1	21,4%	9,9%	12,7%	51,2%	4,8%	40,9%	59,1%	29,2%	45,4%	25,4%
Students 2012/2013	Study Programme	34	23,5%	11,8%	11,8%	47,1%	5,9%	58,8%	41,2%	23,5%	35,3%	41,2%
	Average of similar Study Programmes	34,3	18,4%	13,6%	11,3%	53,4%	3,3%	45,8%	54,2%	28,2%	47,4%	24,5%

		First Cycle Degree: University of previous studies				First Cycle Degree: more frequent class		First Cycle Degree: grade					
		University of Bologna	Other Italian Universities	Foreign University	Other not defined	Class code and name	% of students	First Cycle Degree grade between 66 and 90	First Cycle Degree grade between 91 and 100	First Cycle Degree grade between 101 and 105	First Cycle Degree grade between 106 and 110	First Cycle Degree grade 110 and honors	First Cycle Degree grade not available
Students 2011/2012	Study Programme	61,5%	30,8%		7,7%	L-26 SCIENZE E TECNOLOGIE AGRO-ALIMENTARI	34,6%		26,9%	11,5%	42,3%	11,5%	7,7%
	Average of similar Study Programmes	53,6%	37,7%	0,8%	7,9%	12 SCIENZE BIOLOGICHE	15,9%	7,7%	33,7%	19,2%	18,1%	13,1%	8,3%
Students 2012/2013	Study Programme	55,9%	38,2%		5,9%	L-26 SCIENZE E TECNOLOGIE AGRO-ALIMENTARI	50,0%		44,1%	35,3%	11,8%	2,9%	5,9%
	Average of similar Study Programmes	50,5%	24,7%	0,2%	24,7%	0 SENZA CLASSE	26,2%	5,0%	25,6%	19,6%	15,0%	10,1%	24,7%

## D.2. REGULARITY OF STUDIES

*Insight into the regularity with which the students pass their exams. The graphs and the tables provide information on the number of students who leave the programme between the first and second 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.

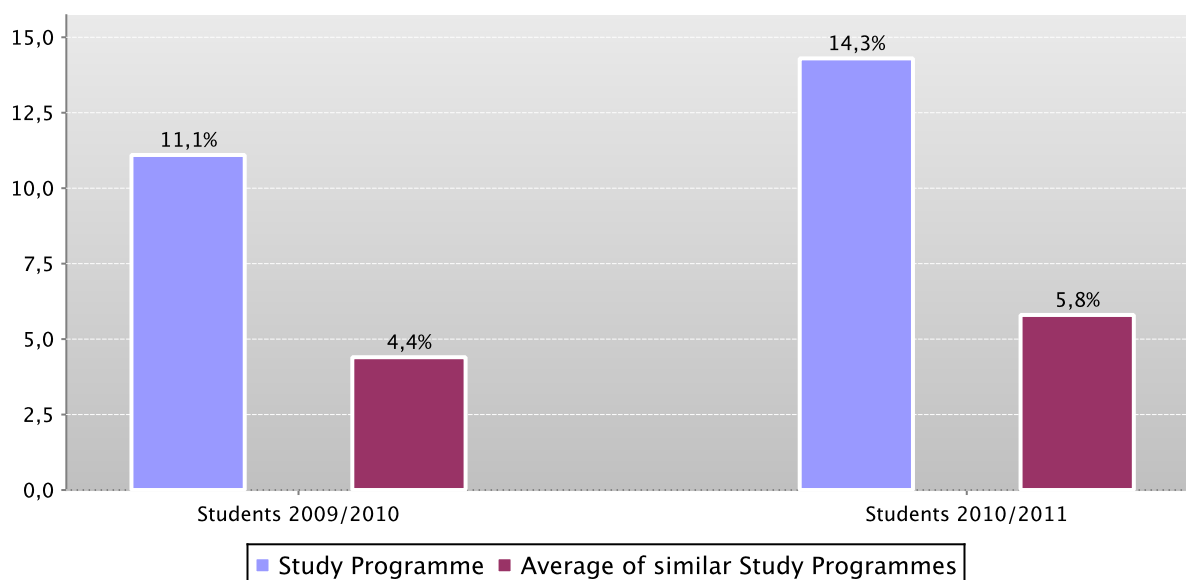
The **graph** shows the percentage of students who leave the programme after the first year compared to the average of similar Study Programmes (belonging to the same group).

The **table** shows the registered students (**new careers**), 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.

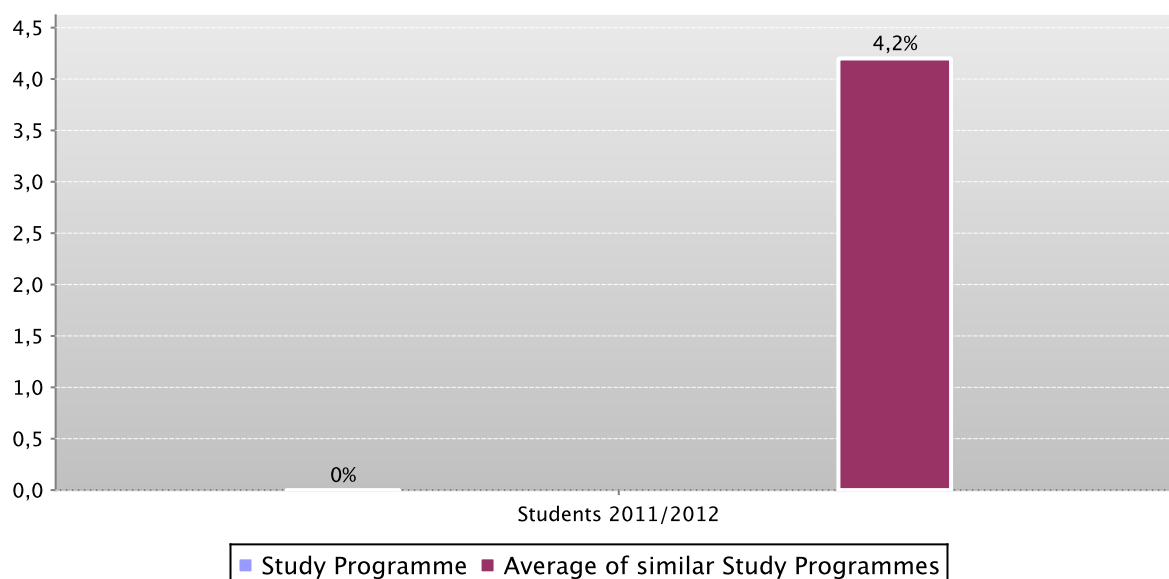
The Study Programme data is compared with the **average of similar Study Programmes** (which belong to the same group), for students registered (**new careers**) in the indicated academic years.

Percentage of withdrawals between years 1 and 2

*Data of the Study Programme D.M. 270/04 Food Science and Technology (code 0879)*



*Data of the Study Programme D.M. 270/04 Food Science and Technology (code 8531)*





Data of the Study Programme D.M. 270/04 Food Science and Technology (code 0879)

		New careers	% withdrawals	% passages and transfers	% repeating students	Students enrolled in the second year
Students 2009/2010	Study Programme	18	11,1%	0,0%	0,0%	16
	Average of similar Study Programmes	27,5	4,4%	1,5%	0,0%	25,9
Students 2010/2011	Study Programme	28	14,3%	0,0%	0,0%	24
	Average of similar Study Programmes	33,3	5,8%	1,6%	0,0%	30,8

Data of the Study Programme D.M. 270/04 Food Science and Technology (code 8531)

		New careers	% withdrawals	% passages and transfers	% repeating students	Students enrolled in the second year
Students 2011/2012	Study Programme	26	0,0%	0,0%	0,0%	26
	Average of similar Study Programmes	33,1	4,2%	0,6%	0,4%	31,3

## D.2.2. REGULAR GRADUATES

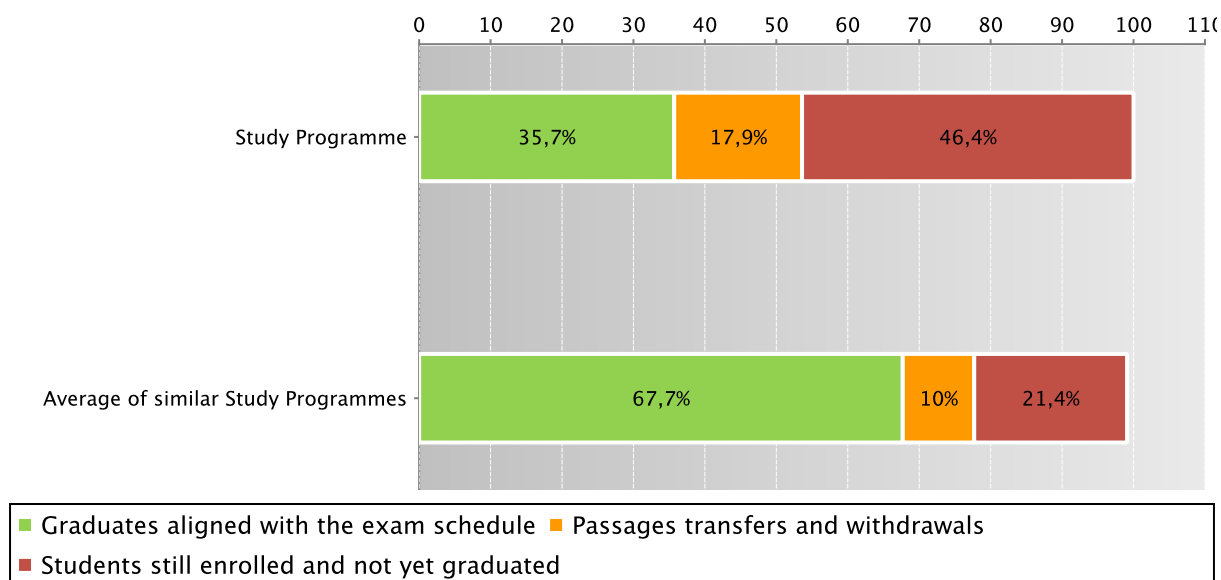
Here you will find information on regular graduates, on how many students, at the end of the regular programme duration, left the programme and how many are still enrolled but **not aligned to the exam schedule**.

The **graph** and the **table** show the situation concerning the **registered students (new careers)** 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 enrolled in the indicated academic year.

Situation of students 2010/2011 at the end of regular duration of the study programme

Data of the Study Programme D.M. 270/04 Food Science and Technology (code 0879)



Data of the Study Programme D.M. 270/04 Food Science and Technology (code 0879)

		New careers		Regular graduates		Passages transfers and withdrawals		Students still enrolled and not yet graduated	
		N.	%	N.	%	N.	%	N.	%
Students 2008/2009	Study Programme	17		15	88,2%	0	0,0%	2	11,8%
	Average of similar Study Programmes	31,3		21	67,1%	2,5	8,0%	7,8	24,9%
Students 2009/2010	Study Programme	18		11	61,1%	3	16,7%	4	22,2%
	Average of similar Study Programmes	27,5		18,7	68,2%	2,5	9,0%	6,2	22,6%
Students 2010/2011	Study Programme	28		10	35,7%	5	17,9%	13	46,4%
	Average of similar Study Programmes	33,3		22,5	67,7%	3,3	10,0%	7,1	21,4%

### 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.

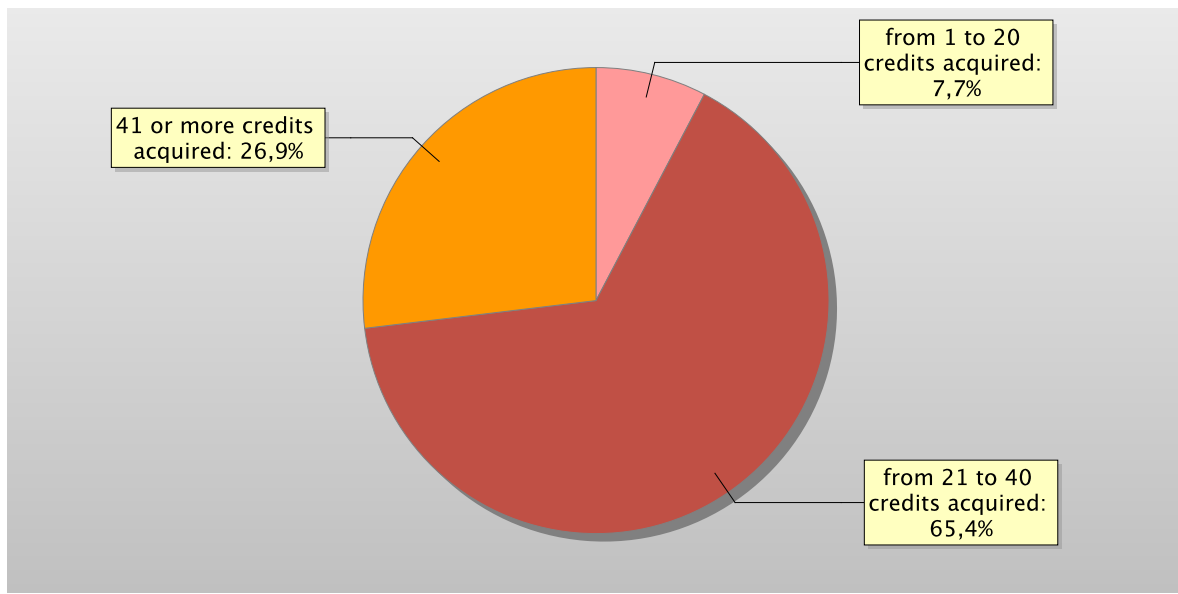
The **graph** shows the distribution of the students according to the number of **credits** obtained at the end of the first year.

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\*

Data of the Study Programme D.M. 270/04 Food Science and Technology (code 8531)



Data of the Study Programme D.M. 270/04 Food Science and Technology (code 0879)

		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	Study Programme	16	12,5%	6,3%	68,8%	12,5%	28,6
	Average of similar Study Programmes	25,9	3,6%	14,2%	42,3%	39,9%	35,8
Students 2010/2011	Study Programme	24	12,5%	29,2%	41,7%	16,7%	23,7
	Average of similar Study Programmes	30,8	2,8%	18,8%	46,1%	32,3%	32,5

Data of the Study Programme D.M. 270/04 Food Science and Technology (code 8531)

	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 2011/2012	Study Programme	26		7,7%	65,4%	26,9%	33,9
	Average of similar Study Programmes	31,3	1,7%	11,3%	46,4%	40,6%	37,1

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

### 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.

The data concerning previous programmes is given in a separate section.

Data of the Study Programmes D.M. 270/04 Scienze e tecnologie alimentari (code 0879), Scienze e tecnologie alimentari (code 8531)

	N. of exams passed	Average grade *
18452 MARKETING DEI PRODOTTI ALIMENTARI	1	
24234 NUTRIZIONE UMANA	26	28,4
29513 STATISTICA ED ELABORAZIONE DEI DATI (C.I.)	4	
29541 INNOVAZIONE DEI PROCESSI NELL'INDUSTRIA ALIMENTARE (C.I.)	30	28,8
29547 MARKETING PER IL SISTEMA ALIMENTARE (C.I.)	26	27,2
29557 QUALITÀ E INNOVAZIONE NELLE PRODUZIONI PRIMARIE (C.I.)	10	26
29562 NUTRIZIONE UMANA (C.I.)	7	28,7
29569 DISEGNO IGIENICO DEGLI IMPIANTI E CONFEZIONAMENTO (C.I.)	21	29,4
29572 CONDIZIONAMENTO E IMBALLAGGIO	2	
29574 ANALISI DELLA QUALITÀ ALIMENTARE (C.I.)	15	28,7
29580 QUALITÀ E FORMULAZIONE DEGLI ALIMENTI (C.I.)	16	28,8
29585 FORMULAZIONE E INNOVAZIONE DI PRODOTTO	2	
29588 MICROBIOLOGIA AVANZATA E PREDITTIVA (C.I.)	15	29,7
29597 INNOVAZIONI NELLA FILIERA DEI PRODOTTI CARNEI E OVOPRODOTTI	18	28,1

	N. of exams passed	Average grade *
31597 BIOTECNOLOGIE GENETICHE PER IL MIGLIORAMENTO DELLA QUALITÀ DEGLI ALIMENTI DI ORIGINE ANIMALE	1	
31600 ECONOMIA DEI SISTEMI QUALITÀ NEL SISTEMA AGROINDUSTRIALE	18	29,3
32814 PROPRIETÀ DEI MATERIALI E CONTROLLO DEGLI IMPIANTI ALIMENTARI (C.I.)	6	28,8
42178 CONTROLLO DELLE MODIFICAZIONI CHIMICHE NEGLI ALIMENTI (C.I.)	19	27,2
66046 STATISTICA ED ELABORAZIONE DEI DATI	23	25
66048 QUALITÀ E INNOVAZIONE NELLE PRODUZIONI PRIMARIE	24	26,2
66053 MODIFICAZIONI CHIMICHE E ANALISI DEGLI ALIMENTI	1	
66055 BIOTECNOLOGIE GENOMICHE PER IL MIGLIORAMENTO DELLA QUALITÀ DEGLI ALIMENTI DI ORIGINE ANIMALE	6	28,8

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

## 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

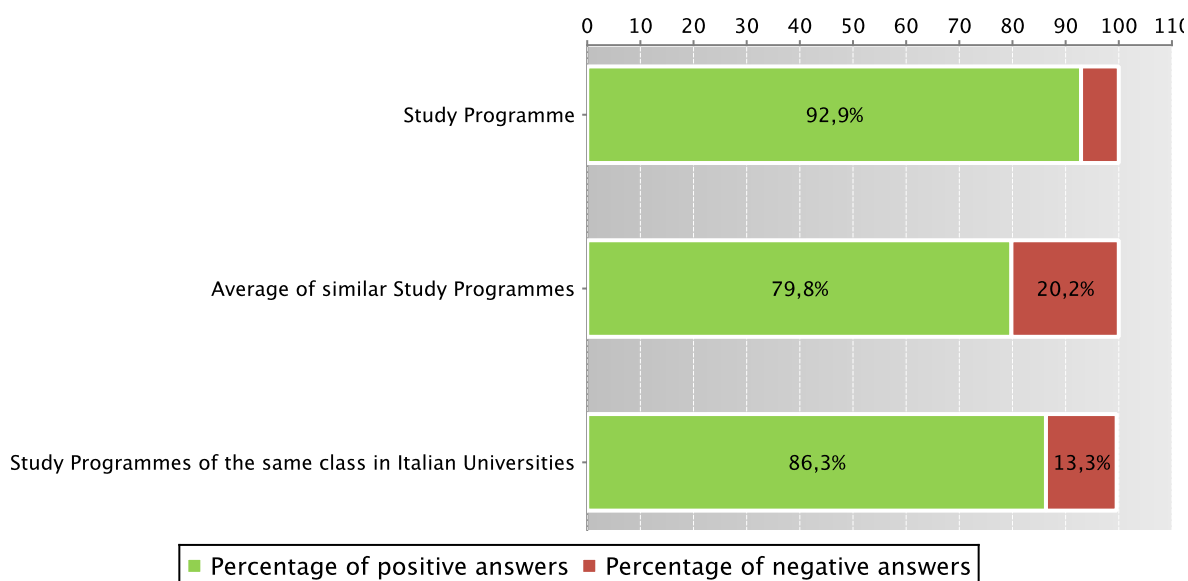
The **graph** shows the percentage of graduates (AlmaLaurea survey) who responded positively to the question: “**Are you generally satisfied with the Study Programme**”.

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)**, and the average of Study Programmes of the same **class** of other Italian universities for the graduates of 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. 270/04 Scienze e tecnologie alimentari (code 0879)*



Data of the Study Programme D.M. 270/04 Scienze e tecnologie alimentari (code 0879)

		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	9	9	88,9%	88,9%
	Average of similar Study Programmes	14,4	12,7	83,6%	73,0%
	Study Programmes of the same class in Italian Universities	53	49	83,7%	67,3%
2011	Study Programme	13	13	100,0%	92,3%
	Average of similar Study Programmes	15	13,7	86,9%	76,5%
	Study Programmes of the same class in Italian Universities	193	186	92,5%	78,0%
2012	Study Programme	14	14	92,9%	85,7%
	Average of similar Study Programmes	17,8	16,2	79,8%	68,0%
	Study Programmes of the same class in Italian Universities	272	248	86,3%	73,8%

Symbols:

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

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

## 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.

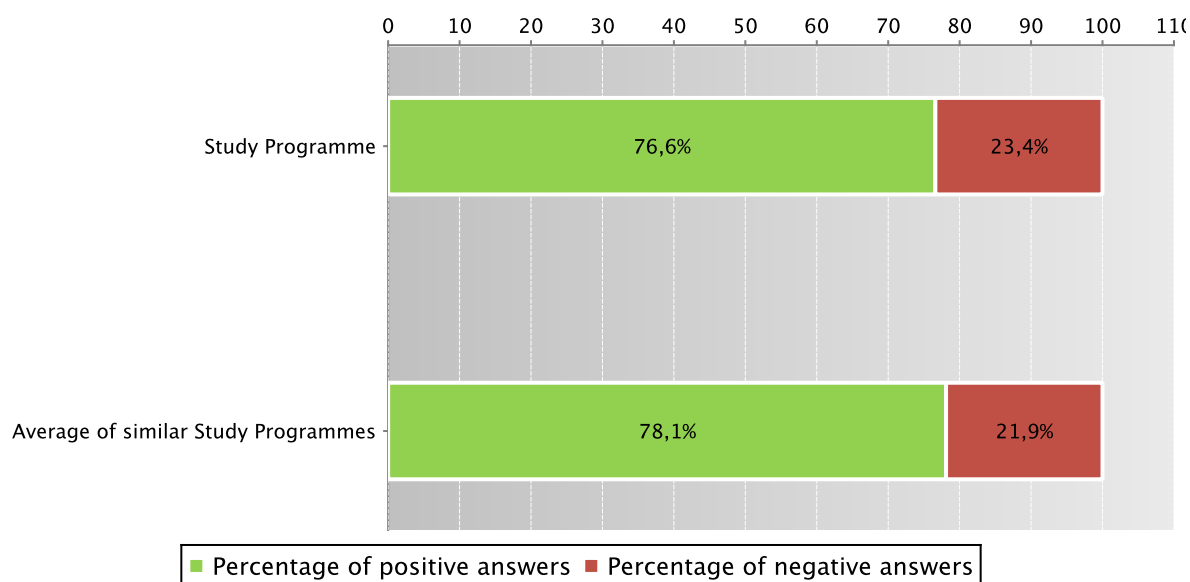
The Study Programme data is compared with the **average of similar Study Programmes** (which belong to the same group), for the indicated academic years.

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 opinions of students attending the course is cared by *Aform* - Quality Assurance Department and *Arug* - 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 Programmes D.M. 270/04 Scienze e tecnologie alimentari (code 0879), Scienze e tecnologie alimentari (code 8531) and of the Study Programme D.M. 509/99 Scienze e tecnologie alimentari (code 0212)*





Data of the Study Programmes D.M. 270/04 Scienze e tecnologie alimentari (code 0879), Scienze e tecnologie alimentari (code 8531) and of the Study Programme D.M. 509/99 Scienze e tecnologie alimentari (code 0212)

		Number of completed questionnaires	% of positive answers concerning the general satisfaction with the course unit – Question 19
a.y. 2009/2010	Study Programme	221	84,5%
	Average of similar Study Programmes	363,8	80,8%
a.y. 2010/2011	Study Programme	266	86,8%
	Average of similar Study Programmes	353,3	77,7%
a.y. 2011/2012	Study Programme	261	76,6%
	Average of similar Study Programmes	405,3	78,1%

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

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

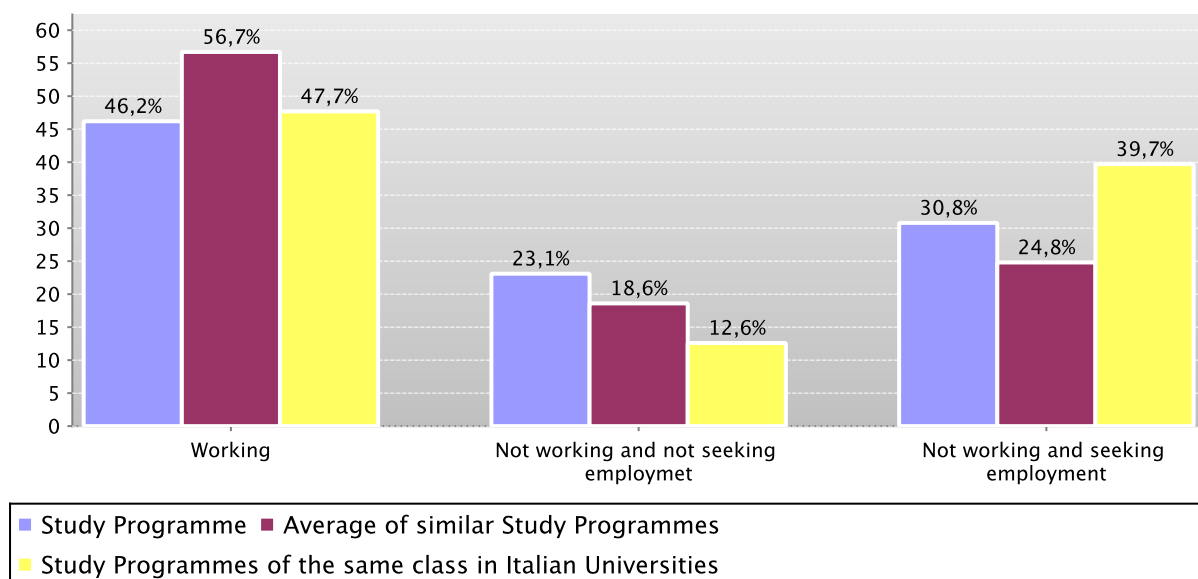
The data is taken from the [AlmaLaurea](#) reports on the employment situation of graduates.

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. 270/04 Food Science and Technology (code 0879)*



Data of the Study Programme D.M. 270/04 Food Science and Technology (code 0879)

	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 2010	Study Programme	9	33,3%	33,3%	33,3%	22,2%	66,7%	33,3%
	Average of similar Study Programmes	12,3	49,8%	24,7%	25,4%	16,3%	58,7%	19,6%
	Study Programmes of the same class in Italian Universities	46	47,8%	21,7%	30,4%	10,9%	61,9%	28,6%
Graduation Year 2011	Study Programme	13	46,2%	23,1%	30,8%	15,4%	50,0%	33,3%
	Average of similar Study Programmes	13,5	56,7%	18,6%	24,8%	10,2%	49,7%	28,2%
	Study Programmes of the same class in Italian Universities	174	47,7%	12,6%	39,7%	4,6%	57,3%	25,6%

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](#).

 See data of previous academic years – Study Programme D.M. 509/99 Food Science and Technologies (code 0212) [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 study. Tables and graphs provide information on number of enrolled students (new careers), focusing on the characteristics of students.*

#### D.5.1.1. ENROLMENTS

 Data of enrolments 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, 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**

Data of students leaving the Study Programme of the last three academic years are shown in paragraph [D.2.1](#).

### **D.5.2.2. REGULAR GRADUATES**

Data of regular graduates of the last three academic years are shown in paragraph [D.2.2](#).

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

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

Data of credits obtained by students in the 1st year of the last three academic years are shown in paragraph [D.2.3.1](#).

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

Data of exams passed and average grade are shown in paragraph [D.2.3.2](#).

## **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**

Data of opinion of graduates are shown in paragraph [D.3.1](#).

### **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.

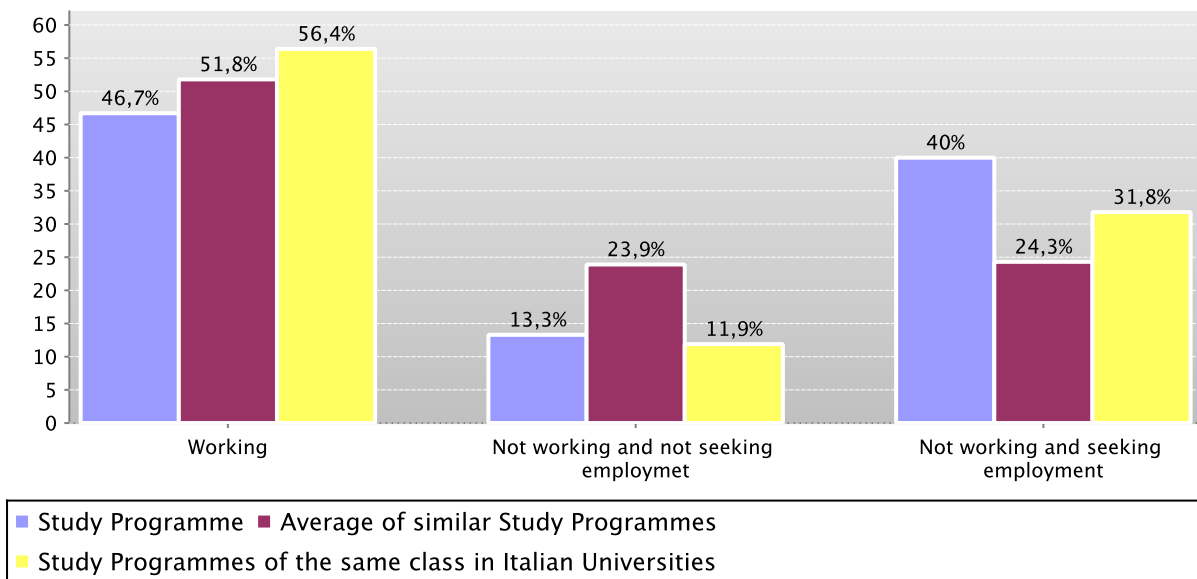
The **graph** shows who is working, who is not working and is not seeking employment, who is not working but is seeking employment.

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 2009 one year after graduating

*Data of the Study Programme D.M. 509/99 Food Science and Technologies (code 0212)*



	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
Study Programme	15	46,7%	13,3%	40,0%	6,7%	28,6%	42,9%
Average of similar Study Programmes	15,6	51,8%	23,9%	24,3%	15,1%	55,4%	25,9%
Study Programmes of the same class in Italian Universities	236	56,4%	11,9%	31,8%	6,8%	50,8%	28,8%

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.

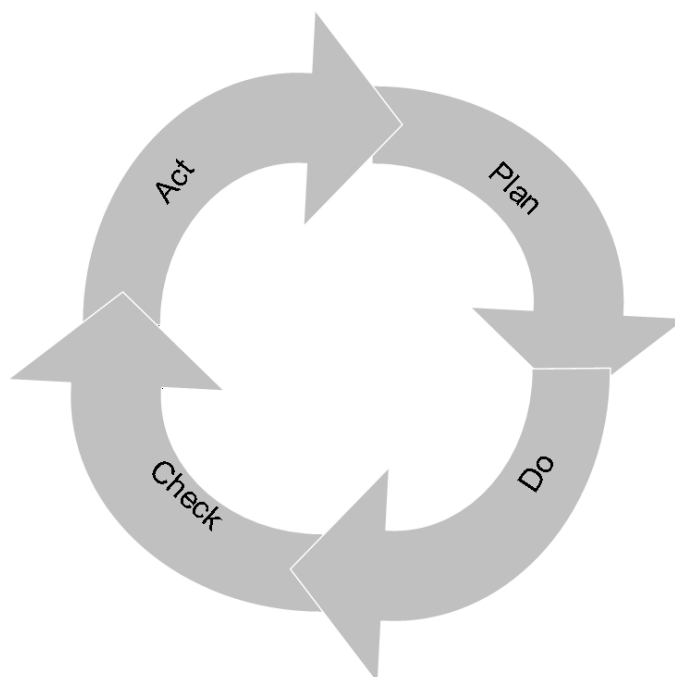
In the Statute and the Strategic Plan 2010-2013 the University of Bologna acknowledges its responsibility in guaranteeing the quality of its study programmes, and for this purpose adopts an "internal quality assurance system".

### 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> 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> 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>• <b>Analysis:</b> 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>• <b>Review:</b> 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>• <b>Sharing:</b> the conclusions of the review activities are submitted to the Academic Bodies and the University Evaluation Board.</li> </ul>	<p>Quality Manager</p> <p>Vice Rector for Teaching and Education</p> <p>Academic Bodies</p>
<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

In 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.