Agència per a la Qualitat del Sistema Universitari de Catalunya

EMPLOYERS

THE OPINION OF EMPLOYERS REGARDING THE EDUCATION RECEIVED BY GRADUATES OF BIOSCIENCES

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AQU CATALUNYA, 2019

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08017 Barcelona

First edition: July 2019

With the cooperation from the sector of

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TABLE OF CONTENTS

INTRODUCTION

Evidence-based proposals for improving study programmes

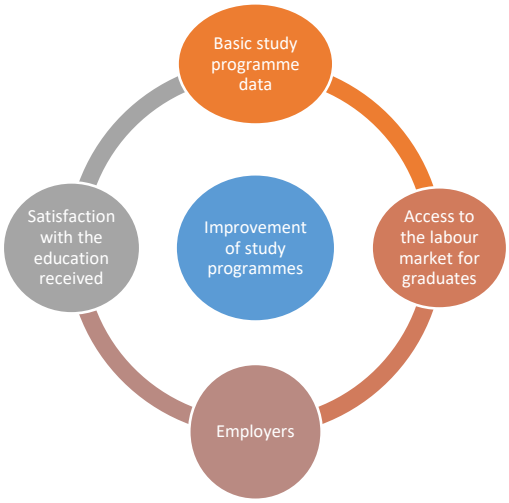
The primary goal of Agència per a la Qualitat del Sistema Universitari (AQU Catalunya) is to **contribute to the improvement of university study programmes in the Catalan university system**. To achieve this, it is essential to benefit from evidence and data making it possible to assess the functioning of each study programme with the aim of making it easier for decisions to be made by the officials in charge of the universities and study programmes and by politicians responsible for universities.

This report sets out evidence regarding the implementation and delivery of study programmes in the field of Biosciences gleaned from the results of the **2018 survey on employers in this field**. Two sectors of employment are distinguished: the first relating to the study programmes of Chemistry and Pharmacy;[1] and the second, the field of Biohealth Sciences,[2] relating to the study programmes of Biology, Biochemistry, Biotechnology, Microbiology and Biomedical Sciences.

The survey strives to gain an acquaintance of the opinion of companies regarding the education received by the individuals who recently graduated in the field of Biosciences they have recruited, particularly with regard to cross-disciplinary and specific skills which bear substantial margin for improvement, among other issues.

In addition to these results, the report incorporates an initial section with **contextual information on the study programmes in Biosciences**, setting out **basic data on the study programmes** and the main results of the **surveys on the satisfaction of individuals who have recently graduated in this field, as well as the results of the survey on their access to the labour market**.

Figure 1. Databases for improving study programmes



[1] Organisations largely employing individuals from the study programmes of Chemistry and Pharmacy are essentially from the industry sector. In the case of Pharmacy, the sample of organisations excludes pharmacies, which took part in a separate survey.

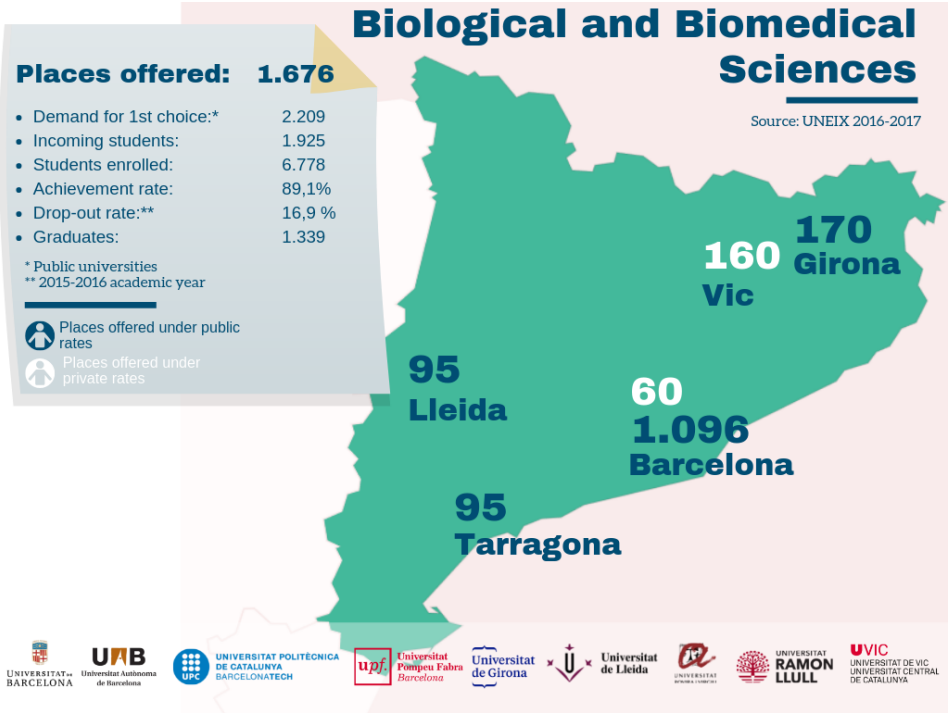
[2] It is equivalent to the AQU Catalunya sub-fields of Biological Sciences and Biomedical Sciences.

INDICATORS ON THE STUDY PROGRAMMES IN BIOSCIENCES

Basic data on the study programmes

The basic data on the study programmes involves **administrative data taken from the UNEIX information system**.

Figure 2. Indicators on the implementation and delivery of study programmes in the sub-fields of Biological Sciences and Biomedical Sciences. 2016-2017 academic year



In all of these sub-fields there is excess demand for 1st choice

Moreover, they show a low drop-out rate.

The sub-fields of Biological Sciences and Biomedical Sciences also exhibit a high achievement rate (nigh on 90%).

Figure 3. Indicators on the implementation and delivery of study programmes in Chemistry and Pharmacy (2016-2017 academic year)

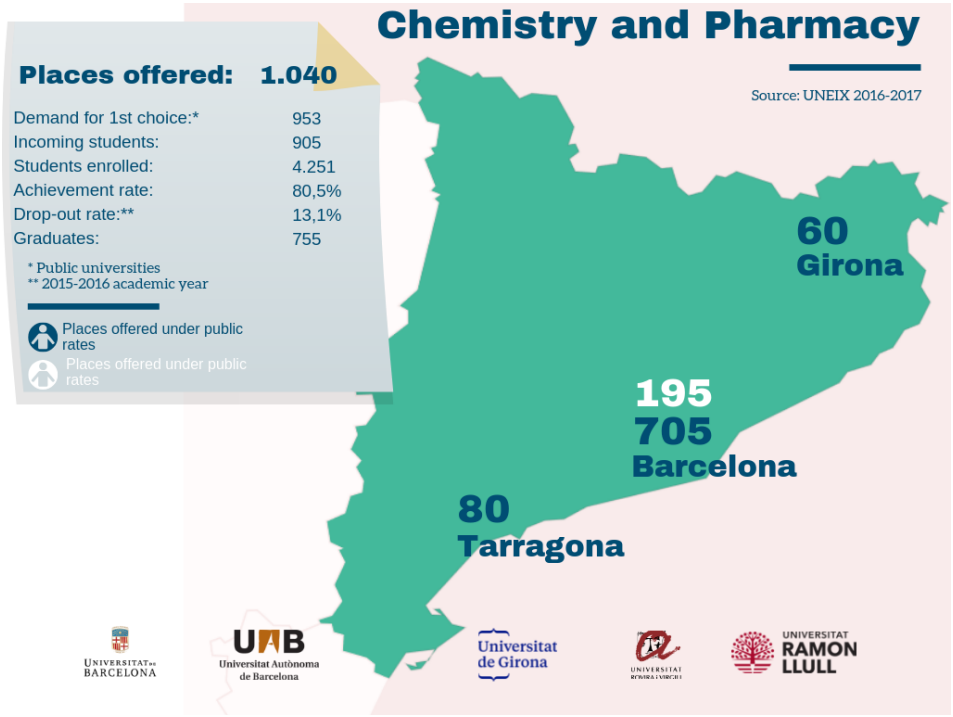
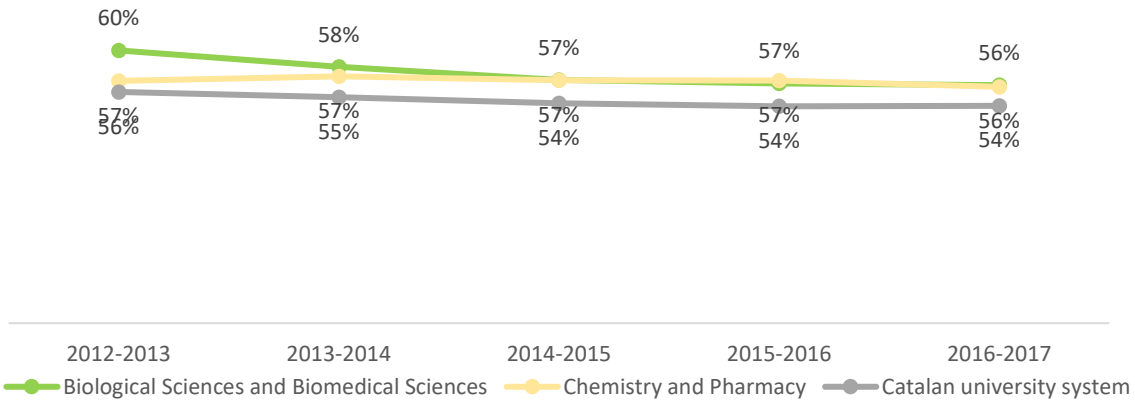


Figure 4. Trend in the percentage of women enrolling on study programmes in Biosciences



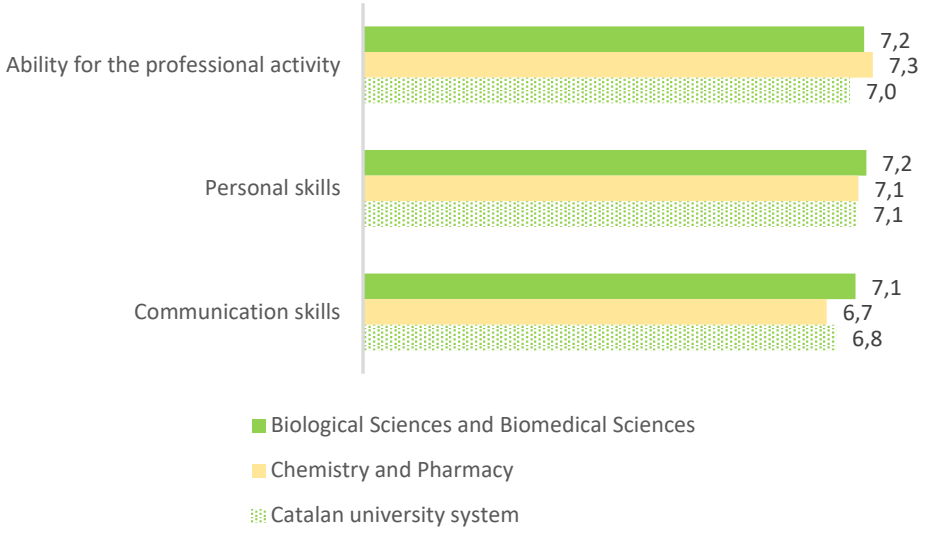
Bachelor's degrees relating to Biosciences show broad gender balance

The trend over the past five academic years has been towards a balance, particularly in the study programmes of Biological Sciences and Biomedical Sciences.

Satisfaction of graduates with the university education received

The data regarding satisfaction with the education received stems from the **satisfaction survey** drawn up by AQU Catalunya. It sets out information on graduates' satisfaction with various characteristics of the education delivered in the university study programme they followed. It is an online survey conducted yearly on all the individuals who graduated one year earlier. The results shown are the averages for 2016, 2017 and 2018 in the respective sub-fields and for the Catalan university system as a whole.

Figure 5. Assessment of the various factors of the education received (from 0 to 10)

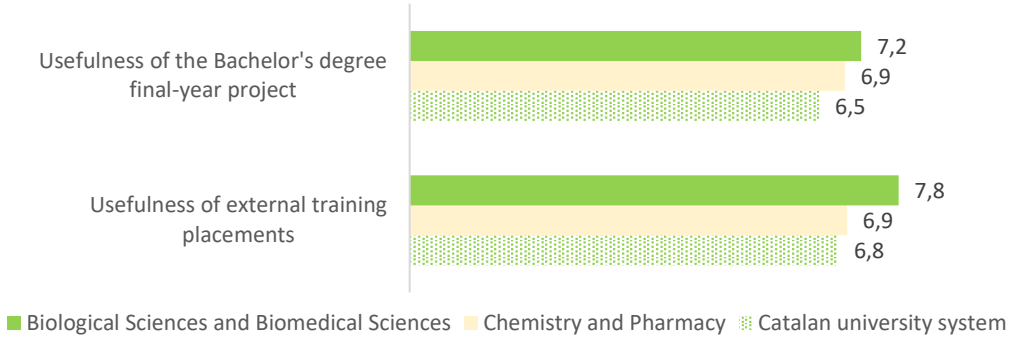


The results obtained are higher than the Catalan university system average, particularly in Biological Sciences and Biomedical Sciences

The ratings given are higher when it comes to ability for the professional activity, while the difference compared to the Catalan system is smaller for personal skills and communication skills.

For study programmes in the sub-fields of Biological Sciences and Biomedical Sciences, the rating for communication skills is markedly above the Catalan university system average.

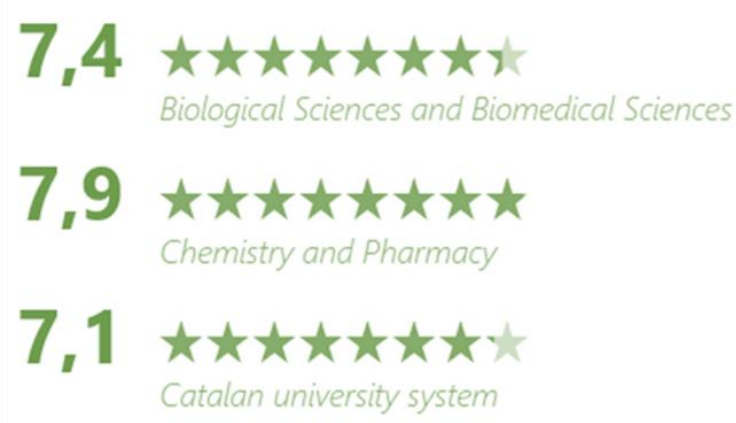
Figure 6. Usefulness of external training placements and Bachelor's degree final-year projects (from 0 to 10)



External training placements and Bachelor's degree final-year projects are both highly rated by graduates

Graduates in the sub-fields of Biological Sciences and Biomedical Sciences in particular are clearly satisfied with the Bachelor's degree final-year project as a system for assessment and with external training placements.

Figure 7. Overall satisfaction with the study programme (from 0 to 10)



Overall satisfaction is also demonstrably higher

In this case, the study programmes in Chemistry and Pharmacy positively stand out. Indeed, the students of these study programmes are significantly more satisfied with their education than those of the Catalan university system as a whole.

Access to the labour market for graduates

The survey on access to the labour market is conducted every three years with the aim of finding out what the experience of graduates is when it comes to access to the labour market three years after completing their university programmes. The results shown relate to the most recent survey (2017) and are broken down according to university and study programme. In addition, the results for the Catalan university system show the average for all degree programmes taught in Catalonia.[3]

Figure 8. Trend in the employment rate of graduates

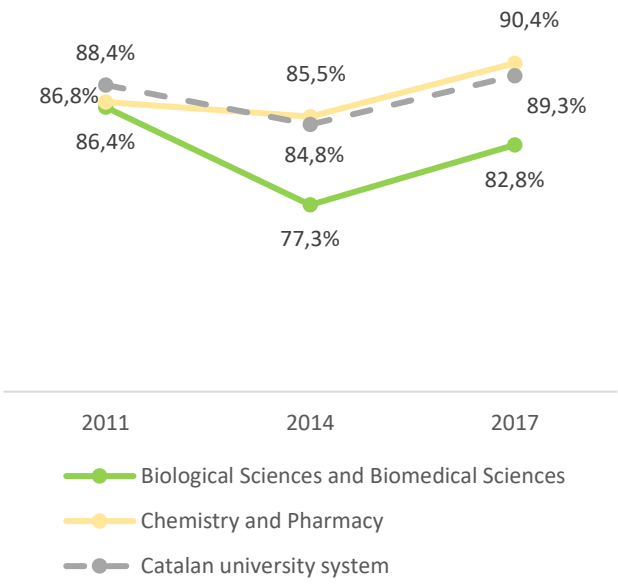
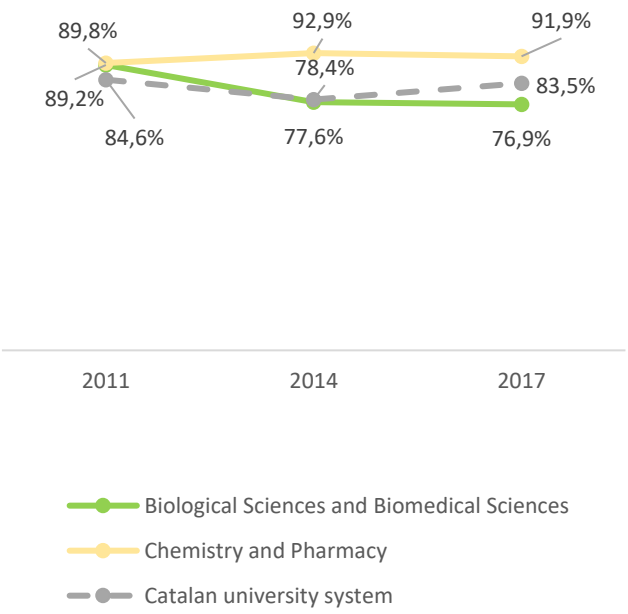


Figure 9. Trend in the percentage of graduates performing university-level functions at work



The suitability of the functions performed is good among graduates of Chemistry and Pharmacy, above the Catalan university system average

Almost all graduates in these fields are in work and perform university-level functions.

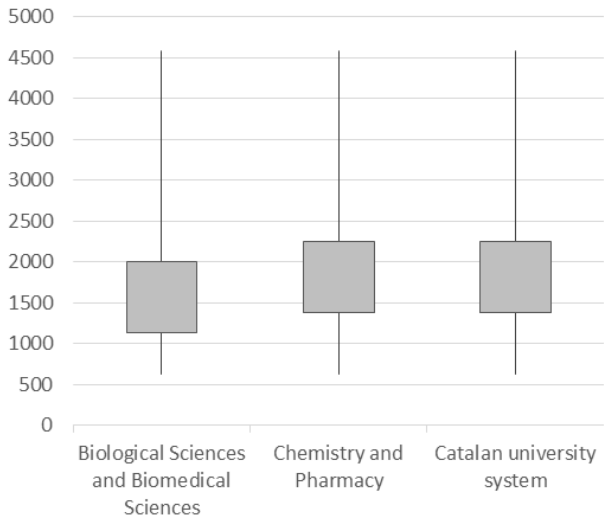
On the other hand, students qualifying in the Biohealth Sciences field obtain scores slightly below the Catalan university system average, scores which have become increasingly further from the average over the past six years.

[3] At classroom-based universities. The results are weighted by a factor that corrects possible proportional variations in the sample.

Figure 10. Contract type in 2017

	Biological Sciences and Biomedical Sciences	Chemistry and Pharmacy	Catalan university system
Permanent	29,1%	51,9%	**50,0%**
Temporary	50,8%	30,7%	**35,1%**
Self-employed	2,6%	5,3%	**10,8%**
Others	17,4%	12,1%	**1,0%**
Total	**100%**	**100%**	**100%**

Figure 11. Gross monthly salaries in 2017 (€). Full-time employed



The significance of other types of contract (such as scholarships) is demonstrably higher than the Catalan university system average

Almost 2 in every 10 graduates benefit from scholarships, illustrating the significance of recruitment for R&D projects to their access to the labour market.

In terms of income, students qualifying in study programmes in the Biohealth Sciences field are slightly below the other two groups.

Figure 12. Level of education received according to skill in 2017 (from 0 to 10)

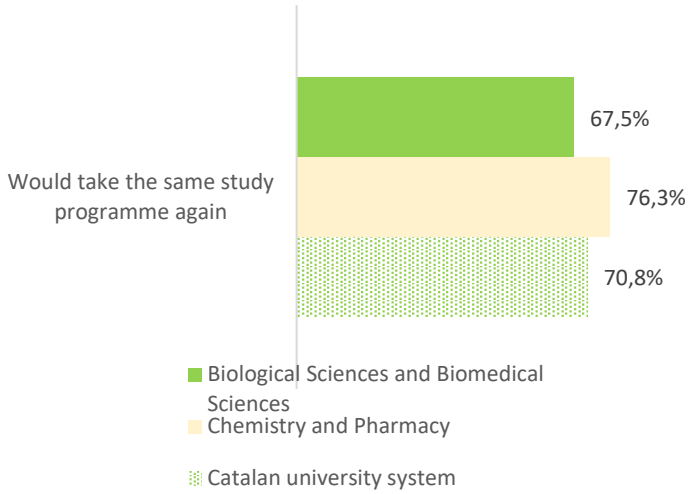
Studies	Creativity: level	Critical thinking : level	Decision making capacity: level	Documentation skills: level	Informatics : level	Languages: level	Leadership: level	Management : level	Oral expression: level	Practical skills: level	Problem solving : level	Team work : level	Theoretical skills: level	Written communication: level
Biochemistry	4,1	6,6	5,5	6,0	5,6	3,4	4,5	4,5	5,9	7,2	6,4	6,8	7,7	6,2
Biology	4,1	6,6	5,5	6,2	5,5	3,5	4,5	5,0	5,9	6,2	5,9	6,5	7,3	6,1
Biomedical Sciences	5,0	7,2	5,7	6,8	5,4	4,3	5,4	5,1	6,7	6,4	6,6	7,8	7,9	6,1
Biotechnology	4,7	6,8	5,8	6,2	5,8	4,6	4,6	5,0	6,2	6,6	6,6	6,8	7,3	6,2
Chemistry	4,7	6,6	6,1	6,9	5,8	3,7	4,6	5,6	6,0	7,1	6,9	6,5	7,6	6,4
Microbiology	5,3	7,3	6,4	6,2	4,9	5,0	5,7	5,1	7,3	7,2	6,9	8,2	7,8	7,0
Pharmacy	3,5	5,3	5,0	5,7	3,7	2,6	3,8	4,2	4,5	5,7	4,8	5,7	6,9	5,1
Total	**5,2**	**6,5**	**5,8**	**5,9**	**5,0**	**3,7**	**4,9**	**5,4**	**5,9**	**5,6**	**6,1**	**6,8**	**6,8**	**6,3**

Theoretical and practical training, critical thought and team work are skills that are valued higher than the Catalan university system average

However, creativity, leadership and management receive lower ratings for these study programmes.

Languages constitutes the main skill that is unaddressed in the Catalan university system as a whole, and the field of Biosciences is no exception.

Figure 13. Percentage of graduates willing to take the same study programme 3 years later



Satisfaction is higher among graduates of Chemistry and Pharmacy than the Catalan university system average

Even so, among the remaining graduates surveyed, the percentage who would take the same study programme again is slightly below the figure for the Catalan university system as a whole.

THE OPINION OF ORGANISATIONS REGARDING THE EDUCATION RECEIVED BY GRADUATES OF BIOSCIENCES

Characteristics of the organisations that have recruited individuals who recently graduated in the field of Biosciences

Figure 34. Classification of organisations according to the number of workers (%)

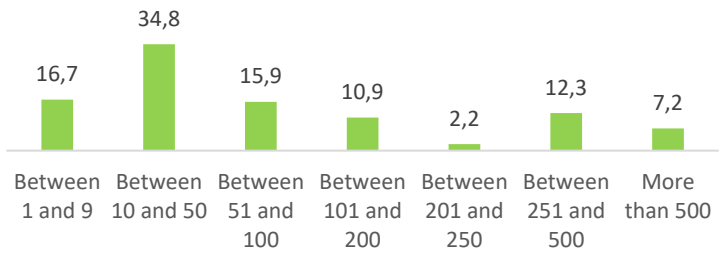


Figure 45. Classification of organisations according to the percentage of workers with a university qualification (%)

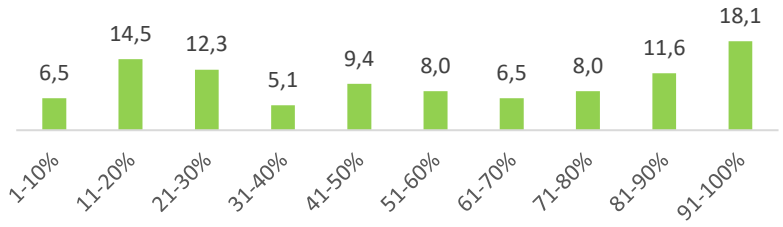
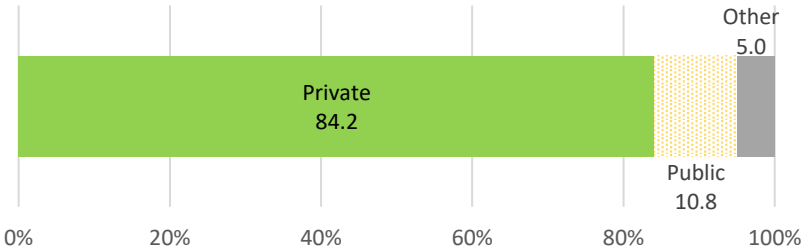


Figure 56. Organisations according to ownership (%)



Half of the organisations hiring individuals who recently graduated in Biosciences are SMEs

Although this circumstance is common to the remaining sectors (due to the structure of the Catalan productive framework), it is noteworthy that 20% of the organisations hiring individuals in this sector are major companies (with more than 200 employees).

The qualification of these workforces varies depending on the organisation: some largely employ highly qualified individuals while others employ a higher percentage of labourers than staff with a university education.

Figure 67. Organisations that have operated in the international sphere

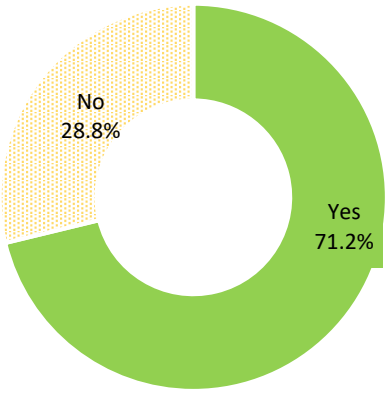
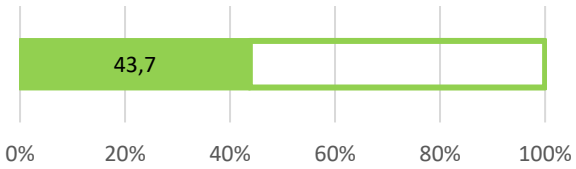


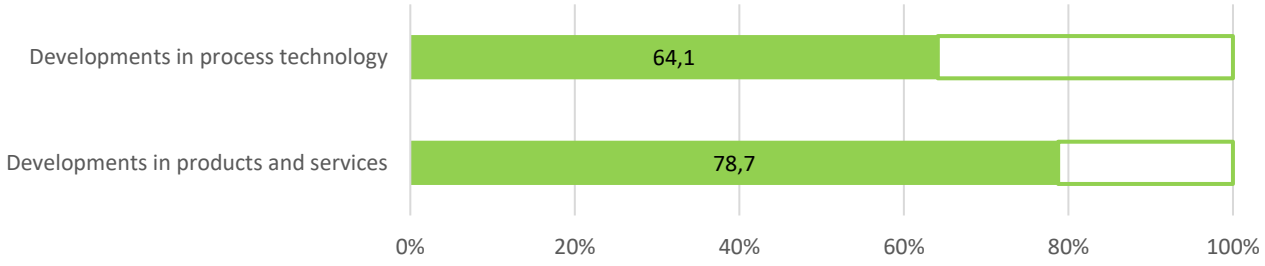
Figure 78. Percentage of sales and services in the international sphere compared to the total



Most of these organisations have ventured for internationalisation...

Around 7 in every 10 organisations engage in relations in the international sphere and state that the international market accounts for 44% of their total sales and services on average. This proportion is similar to other sectors for which the international market is important, such as tourism, ICTs or production engineering.

Figure 89. Organisations that have introduced developments in process technology and/or in products or services (%)



...and for innovation

64% state that they have incorporated major changes in their process technology, i.e., new equipment or software and/or new forms of management. 79% have released new products or services onto the market or incorporated them into the company.

Note: “Developments in process technology” refer to major changes in process technology: new machinery or software, new forms of management (just-in-time production, quality and/or knowledge management). Also, “developments in products or services” refer to products or services that are completely new on the market or to the company (substantially enhanced products or services).

Recruitment of individuals who recently graduated in the field of Biosciences

Table 1. Number and percentage of organisations that have recruited individuals who recently graduated in the field of Biosciences according to study programme

	Study programme	*n*	Percentage
Chemistry and Pharmacy	Chemistry	27	19.6%
	Pharmacy	16	11.6%
Biohealth Sciences	Biology	44	31.9%
	Biochemistry	15	10.9%
	Biotechnology	20	14.5%
	Microbiology	2	1.4%
	Biomedical Sciences	14	10.1%
	Total	**138**	**100%**

Table 2. Business activity of the employer according to the sub-field of the study programme followed by the individual recruited

		Chemistry and Pharmacy	Biohealth Sciences	Total
A	Agriculture, livestock farming, forestry and fishing	2.3%	6.3%	5.1%
C	Manufacturing industries	53.5%	18.9%	29.7%
D, E	Electricity, gas and water	2.3%	1.1%	1.4%
G	Sale and repair of motor vehicles		1.1%	0.7%
I	Hospitality		3.2%	2.2%
M	Professional, scientific and technical activities	20.9%	26.3%	24.6%
O, P	Public administration and education	2.3%	11.6%	8.7%
Q	Healthcare and social service activities	7.0%	15.8%	13.0%
R	Artistic, recreational and entertainment activities		1.1%	0.7%
S, T, U	Others	11.6%	14.7%	13.8%
	Total	100%	100%	100%

Organisations that recruit individuals who recently graduated in Biosciences are primarily manufacturing industries, companies from the R&D activity and consulting sectors, and healthcare bodies

Specifically, 30% are manufacturing industries (a figure that rises to 54% among graduates of Chemistry and Pharmacy); 25% are companies from the professional, scientific and technical activity sector, which includes R&D activities and consulting, among others; and, lastly, 13% are healthcare bodies.

Figure 20. Relevance of higher education in the recruitment of individuals who recently graduated (%)

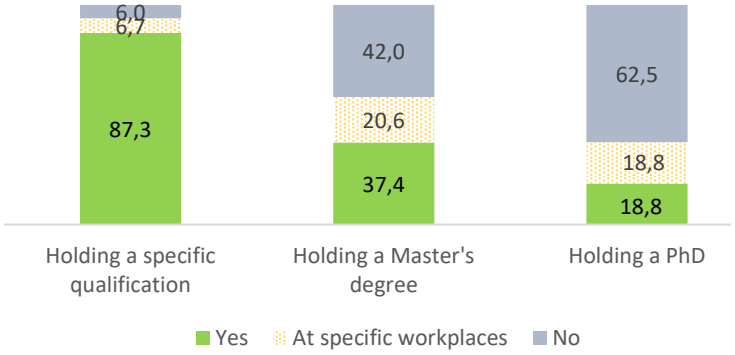


Table 3. Relevance of higher education in the recruitment of individuals who recently graduated at all or certain workplaces

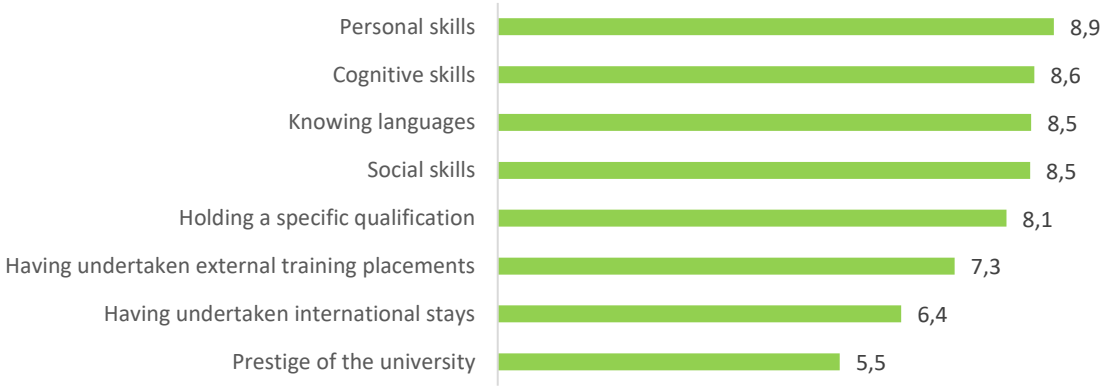
	Chemistry and Pharmacy	Biohealth Sciences	Total
Holding a specific qualification	93.0%	94.5%	94.0%
Holding a Master's degree	50.0%	61.8%	58.0%
Holding a PhD	28.6%	41.9%	37.5%

Holding a Master's degree is relevant when it comes to recruitment for around 6 in every 10 organisations, while holding a PhD is relevant for 4 in every 10

It should be pointed out that when compared to other sectors analysed, organisations recruiting professionals from the field of Biosciences place the greatest relevance on possession of a Master's degree or PhD among candidates.

In addition, these scores are higher in the case of the field of Biohealth Sciences.

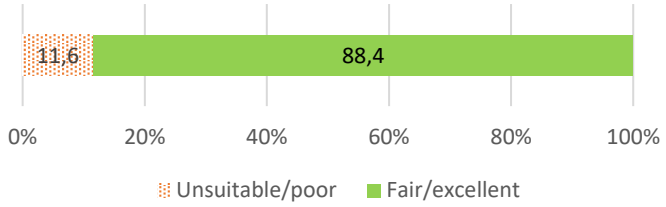
Figure 21. Relevance of certain factors in the recruitment of individuals who recently graduated (from 0 to 10)



Personal, social and cognitive skills, along with languages, are the most highly valued factors when it comes to recruitment

The remaining factors, such as having undertaken external training placements or international stays, or the prestige of the university, are less important in recruitment, although the scores are above 5 in all cases.

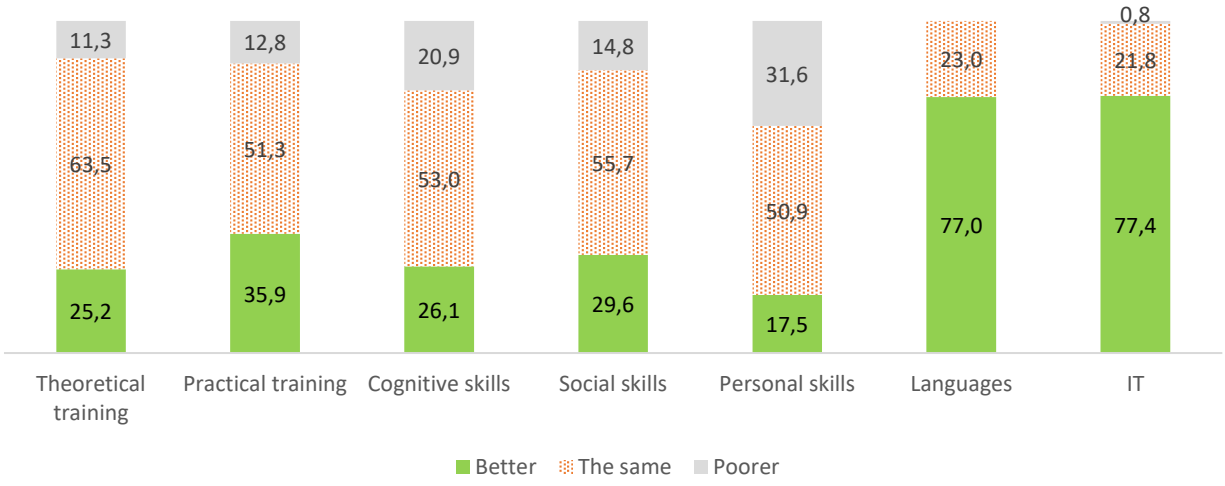
Figure 22. Suitability of individuals who recently graduated in Biosciences to the needs of the workplace (%)



Individuals who graduate in Biosciences are well suited to the workplace

Almost 9 in every 10 organisations surveyed consider that the individuals graduating in Biosciences are suited to the needs of the workplace. This proportion is higher than in other associated fields, such as pharmacies or engineering (8 in every 10).

Figure 23. Trend in the current education compared to that received 5 and 10 years ago (%)



The education received in terms of languages and IT has improved in study programmes in the field of Biosciences in recent years

77% of companies consider that IT skills and languages have both improved.

Furthermore, more than half of the companies surveyed feel that the education received by graduates in the field of Biosciences in terms of theoretical and practical training and cognitive skills (problem solving, critical thought, creativity, etc.), social skills (adapting to a working group, emotional intelligence, etc.) and personals skills (responsibility, initiative, autonomy, etc.) has remained constant.

It is also significant that 1 in every 3 organisations consider that the personal skills of individuals who have recently graduated in Biosciences have declined in recent years.

These results are slightly more positive than those seen in other sectors reviewed in the employers' study from 2018, such as pharmacies or the field of production and ICT engineering.

Difficulties in recruitment

Figure 24. Organisations that encountered difficulties in recruiting staff with suitable profiles

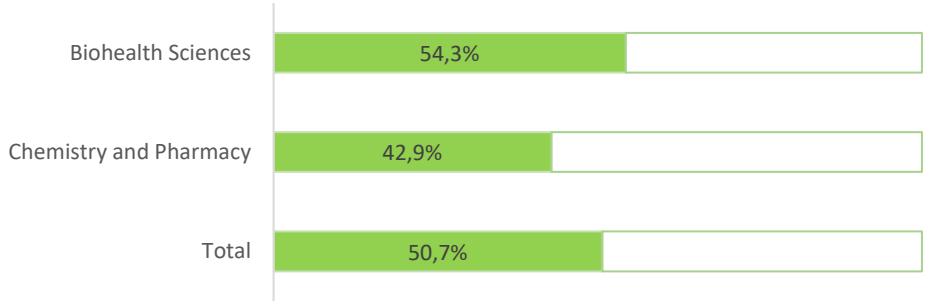
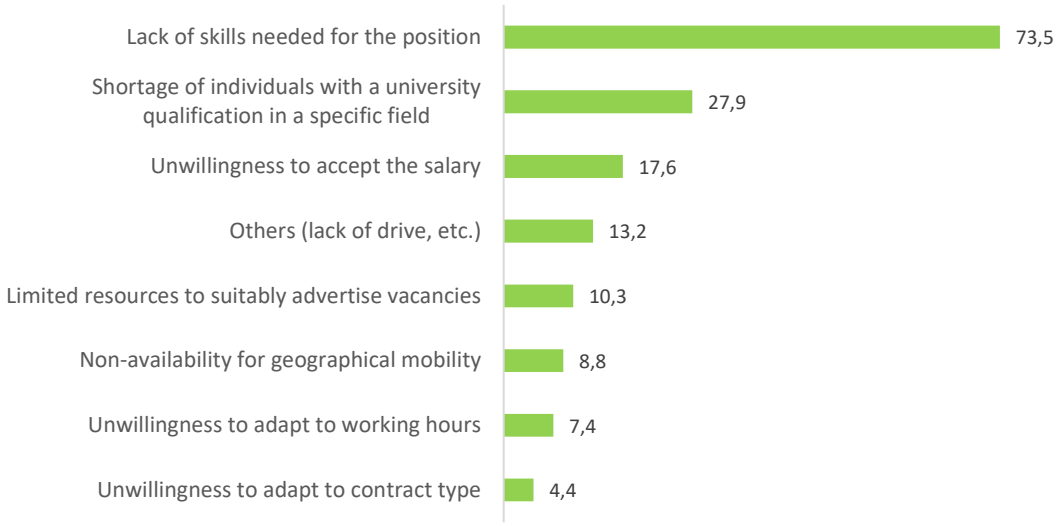


Figure 95. Reasons for difficulties in recruiting staff with suitable profiles (% of organisations)



Half of companies report having encountered difficulties in recruitment, particularly in the Biohealth Sciences sphere

This is 9 percentage points higher than the value obtained in the employers' study from 2014 for the production sector overall (42%). Nevertheless, of the sectors analysed, it is not the one that encountered the greatest difficulties. Indeed, it is below ICTs (80%), tourism (70%) and production engineering (67%), among others.

Lack of skills needed for the position

Around 3 in every 4 companies that encountered difficulties in recruitment state that the candidates lacked the necessary skills for the position, a higher percentage than in other sub-fields such as Economics and Business (60%) or Tourism (48%).

Skills of recently graduated individuals

Table 4. Cross-disciplinary skills that should be improved in study programmes in the field of Biosciences

	Total % of companies
Numerical skills	3.3
Documentation	6.6
Use of most common IT tools	10.7
Theoretical training	11.5
Leadership	16.4
Negotiation skills	18.9
Capacity for learning and self-learning	20.5
Oral expression	21.3
Written expression	26.2
Team work	27.9
Languages	28.7
Responsibility at work	34.4
Practical training	40.2
Ability to offer new ideas and solutions	41.0
Autonomous work	42.6
Problem solving and decision-making	61.5

Problem solving and decision-making are key skills that need to be improved in study programmes in Biosciences

Indeed, 62% of organisations assert this, while around 40% also back improving practical training, the ability to offer new ideas and solutions and autonomous work.

It should be pointed out, however, that improvements tend to be reported as necessary with regard to these cross-disciplinary skills in most study programmes in Catalonia.

On the other hand, the level of competency is suitable in many skills, such as numerical skills, documentation and use of IT tools.

Table 5. Specific skills that should be improved in study programmes in the field of Biosciences

	Percentage of companies
Knowledge of the foundations of genetic engineering and application of the methodology used in genetic modification of organisms for industrial use or biomedical research	5.3
Use of various bioinformatics tools to extract information from databases relating to molecules exhibiting biological activity	8.4
Ability to apply knowledge of the foundations of biological sciences (energy and matter flows, regulation and/or association in biological systems) to the design of cell-based assays, to the design with animal models or to the design of biotechnological processes	8.4
Ability to give advice on issues relating to the main fields of application and the technologies of Biosciences	13.7
Knowledge of current legislation applicable to the design and use of genetically-modified organisms and the use of animal models or other lab-based procedures with regard to their ethical or sustainability-related implications	16.8
Knowledge of laboratory instrumentation and safe application of experimental methodologies and protocols	22.1
Use of statistical IT programmes for processing complex data	23.2
Application of professional values in the field of biosciences	26.3
Ability to adopt a scientific approach to problem solving	27.4
Ability to organise, analyse and interpret experimental results from a statistical standpoint	32.6
Integration of knowledge in a professional and research-based setting	46.3
Ability to plan, draft, implement and/or coordinate research, development and innovation projects	56.8

In terms of specific skills that need to be improved, the ability to pursue R&D projects and integration of knowledge in a professional setting stand out

57% of the companies surveyed report that there is scope for improving the ability to plan, draft, implement and/or coordinate research, development and innovation projects. 46% highlight that there is room for improvement in the integration of knowledge in a professional and research-based setting. This is followed by 33% of companies reporting that shortcomings should be addressed in the education delivered when it comes to the ability to organise, analyse and interpret experimental results from a statistical standpoint.

Table 6. Cross-disciplinary skills with greater scope for improvement according to degree programme (% of organisations)

	Chemistry and Pharmacy	Biohealth Sciences
Languages		36%
Practical training	39%	41%
Ability to offer new ideas and solutions	39%	42%
Autonomous work	44%	42%
Problem solving and decision-making	61%	62%

The shortcomings in skills reported are virtually the same across all the study programmes in Biosciences

Improvements are identified as being additionally necessary only in the study programmes in the field of Biohealth Sciences in terms of language level.

In terms of specific skills, the need for improvement is especially noteworthy when it comes to the ability to adopt a scientific approach to problem solving among graduates of Pharmacy.

Table 7. Specific skills with greater scope for improvement according to sub-field (% of organisations)

	Chemistry and Pharmacy	Biohealth Sciences
Ability to adopt a scientific approach to problem solving	38%	
Integration of knowledge in a professional and research-based setting	46%	46%
Ability to plan, draft, implement and/or coordinate research, development and innovation projects	69%	55%

Note: skills reported by 35% of organisations surveyed or more. Organisations that recruited individuals who recently graduated in Chemistry were not asked about specific skills in the field of Biosciences. Therefore, the results for the Chemistry and Pharmacy sub-group only incorporate the opinion of organisations about the degree programme in Pharmacy.

Figure 106. Satisfaction of employers with the skills of individuals who recently graduated in Biosciences (from 0 to 10)

Satisfaction with the skills of individuals who recently graduated in Biosciences

Despite there being scope for improvement in the education received, organisations are generally satisfied with the skills of the recently graduated individuals they have recruited. Their overall degree of satisfaction stands at 7.4, and there is very little distinction to be made between study programmes. This value is in keeping with the overall satisfaction of employers from other sectors reviewed.

Cooperation from the business community with universities

Figure 117. Extent to which companies cooperate with universities according to the type of activity (%)

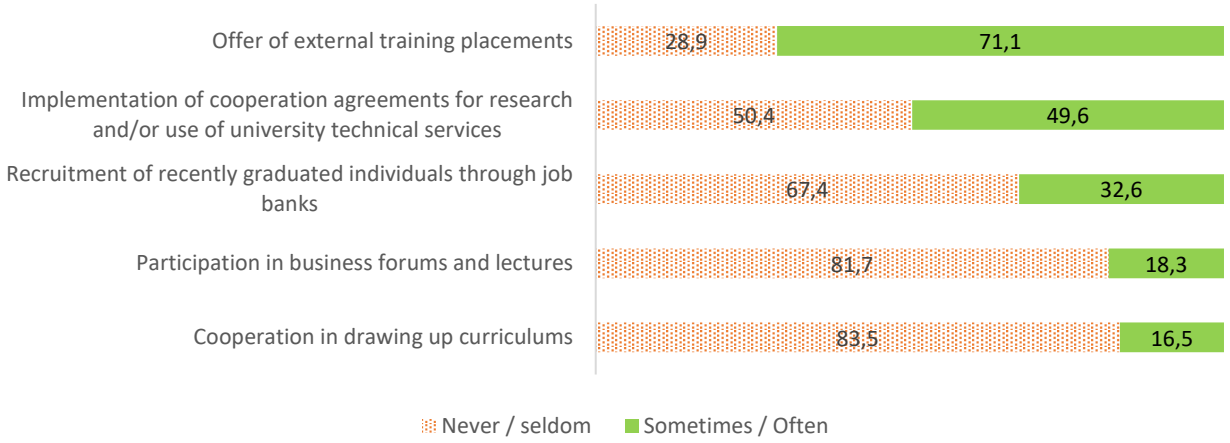


Figure 128. Areas for improvement in job banks or training placements organised by universities (% of organisations)

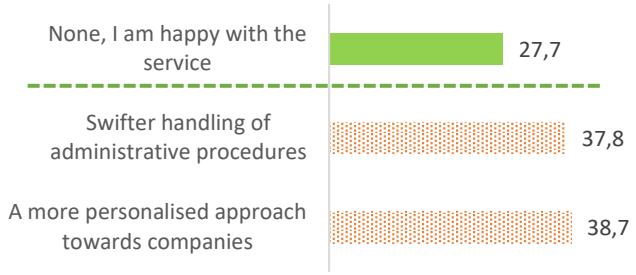


Figure 139. Satisfaction with job bank services or training placement services (on a scale of 0 to 10)

Half of the organisations in the field of Biosciences have implemented cooperation agreements of some kind for research with universities and/or have used their technical services

As with the other sectors reviewed in the employers' study from 2018, the activity in which companies and universities are most closely engaged relates to training placements offered to students (with 3 in every 4 companies taking part). Nevertheless, in the field of Biosciences, it stands out that 50% of organisations have implemented cooperation agreements for research with universities and/or have used their technical services.

High degree of satisfaction with the job bank and training placement service

The level of satisfaction among those who used these services stands at 7.4; even so, they do believe there is scope for speeding up administrative procedures and for gaining a better acquaintance of companies' needs.

In-house training of recently graduated individuals

Figure 30. Organisations funding training for individuals who recently graduated

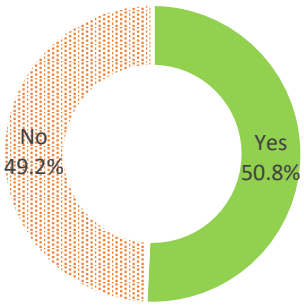


Table 8. Type of training funded by organisations

	%
On-the-job training	63.1
Training during working hours	73.8
Off-the-job training	27.7

Figure 31. Reasons for funding training (%)

Half of organisations fund training for the individuals they have recruited and who have recently graduated

Almost 3 in every 4 offer training during working hours. For most companies, the goal of this training is to improve individuals' specific knowledge of the field of Biosciences.

40% fund this training to improve individuals' basic knowledge of the sector, a percentage that is lower than the figures seen in other sectors, such as pharmacies (63%) or production and ICT engineering (45%).

Forecast

Figure 32. Trend in qualified employment in the sector

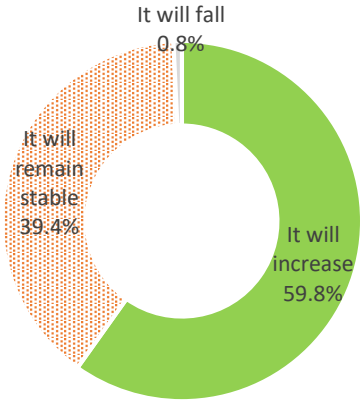


Table 9. Reasons for the increase in employment

Reasons	%
Company expansion	76.9
Organisational or technological changes	29.5
Staff rotation	12.8
Others	3.8

Note: multiple response

Excellent prospects for companies in the field of Biosciences: 6 in every 10 envisage growth in qualified employment

It is one of the fields analysed with the highest percentage, exceeded only by the fields of ICT, design and production engineering.

Skills such as languages, new technologies and adaptability to changes and new demands will become more important in the future.

The most important areas of employment shall be commerce and project management, while the prevalence of employment relating to unskilled staff is in decline.

*Figure 33. Skills that will gain importance in the field of Biosciences**

*Figure 34. Most important area of employment in the field of Biosciences**

*Figure 35. Least important area of employment in the field of Biosciences**

*These are open questions. Responses with the same meaning have been grouped into categories. Categories referred to more than 3 times are shown.

CONCLUSIONS

- Satisfaction among individuals who have graduated in the field of Biosciences is high.
- However, access to the labour market among these graduates varies according to the degree programme. Although the study programmes in Chemistry and Pharmacy score higher than the average for the Catalan university system in almost all variables reviewed, the same is not true of the study programmes in the field of Biohealth Sciences, for which suitability, satisfaction and salaries obtained lower ratings.
- Indeed, in the case of study programmes in the field of Biohealth Sciences, although there is initially excess demand for these studies, by the end of the period fewer graduates would take the same study programme again and the scores obtained in terms of employment are lower. This is not the case with Chemistry and Pharmacy.
- A contractual relationship involving a scholarship (accounting for almost 2 in every 10 recruitments among graduates of study programmes in the Biohealth Sciences field) is significant, illustrating the importance of the R&D sector when it comes to access to the labour market for these graduates, though this is associated with more temporality and slower and more varied career paths, more varied career paths, an issue that needs to be addressed.

Organisations that recruit graduates of Biosciences have the following characteristics:

- 20% of organisations recruiting individuals from this field are major companies (with more than 200 employees). Most of these companies have ventured for internationalisation and have incorporated innovations (both in terms of technology and with regard to their products and services).
- They belong to the manufacturing industry, R&D activity and healthcare sectors.
- When it comes to recruiting, this sector places the greatest relevance on holding a Master's degree (58%) and a PhD (37%). Moreover, this field also regards the personal, social and cognitive skills of candidates and their knowledge of languages to be of importance.
- Half of the organisations surveyed have encountered difficulties in recruiting staff with suitable profiles, primarily on account of the fact that candidates lacked the necessary skills for the position. Nevertheless, of all the sectors analysed, it is not the one that encountered the greatest difficulties. Indeed, other associated fields such as pharmacies and engineering report this to be true in almost 70% of cases.

With regard to university education:

- In terms of cross-disciplinary skills, problem solving and decision-making show the greatest need for improvement, as is the case with other sectors.
- In relation to specific skills in the field of Biosciences, almost half of organisations state that there are shortcomings in education when it comes to the ability to lead R&D projects and integration of knowledge in a professional setting. To a lesser extent, although reported by a third of organisations, the need to improve when it comes to the analysis and interpretation of results from a statistical standpoint is also striking.
- Despite these areas for improvement, employers are satisfied with the skills of the recently graduated individuals they have recruited (at 7.4 out of 10).
- Half of the organisations in the field of Biosciences have implemented cooperation agreements for research with universities and/or have used their technical services. As with the other sectors reviewed, the activity in which companies and universities are most closely engaged relates to training placements offered to students (with 3 in every 4 companies taking part).
- Around 6 in every 10 organisations envisage growth in qualified employment owing to company expansion, making this sector one of the most prominent in terms of expected growth in this respect.

- Skills such as languages, new technologies and adaptability to changes and new demands will become more important in the future, according to employers.
- In terms of the trend in employment, increasingly important areas will be related to commerce and project management, while the prevalence of employment relating to unskilled staff and administration will be in decline.

DATA SHEET

Survey for employers

Population	Organisations that may have potentially recruited individuals who recently graduated from universities in Catalonia in the past 3 years[4]
Survey period	Online survey: from 26/02/2018 to 16/03/2018 Telephone survey: from 27/06/2018 to 5/07/2018
Survey type	Online and over the telephone
Average time taken	Telephone survey: 14'59''

	Population	Sample	Response rate	Sample error
Organisations potentially from the field of Biosciences	392	138	35%	7%
All organisations	30,018			

Survey on satisfaction (2018)

Degree programme (graduates from 2016, 2017 and 2018)	Population	Sample	Response rate	Sample error
Chemistry and Pharmacy	2,076	550	27%	4%
Biohealth Sciences	3,982	1,134	29%	2%

Survey on access to the labour market (2017)

Degree programme (graduates from 2013)	Population	Sample	Response rate	Sample error
Chemistry and Pharmacy	624	344	55%	4%
Biohealth Sciences	1,264	677	54%	3%

[4] Most contacts with organisations stem from Catalan universities' job banks.

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ANNEX. RELATED STUDY PROGRAMMES

Study programmes being delivered in the 2018-2019 academic year

	UB	UAB	UPC	UPF	UdG	UdL	URV	UVic-l	URL	UIC
Biochemistry	✓	✓								
Biochemistry and Molecular Biology							✓			
Bioengineering									✓	✓
Biological Systems Engineering			✓							
Biology	✓	✓			✓			✓		
Biomedical Engineering	✓		✓	✓	✓		✓			
Biotechnology	✓	✓			✓	✓	✓	✓	✓	
Environmental Biology		✓								
Microbiology		✓								
Chemistry	✓	✓			✓		✓		✓	
Biomedical Sciences	✓	✓				✓				
Human Biology				✓						
Pharmacy	✓								✓	

Agència per a la Qualitat del Sistema Universitari de Catalunya
July 2019 · AQU-32-2019