
Centre Monitoring Report

Doctoral School

Academic year 2017/2018 / 2018/2019

3 March 2020

Table of contents

1. Basic identifying details	2
2. Report authors	2
3. Follow-up of the external assessment processes' requirements and recommendations	3
4. Assessment of compliance with the monitoring standards	4
4.1. Standard 1. Quality of the training programme	4
4.2. Standard 2. Relevance of public information	8
4.3. Standard 3. Efficiency of the internal quality assurance system	10
4.4. Standard 4. Suitability of teaching staff	11
4.5. Standard 5. Effectiveness of learning support systems	15
4.6. Standard 6. Quality of programme learning outcomes	17
5. Assessment of the programmes	21
PhD programme in the Information and Knowledge Society	22
PhD programme in Education and ICT (E-learning)	23
PhD programme in Network and Information Technologies	25
PhD programme in Bioinformatics (UAB, UPC, UdG, UdL, UOC, UVic-UCC)	26
6. Improvement actions	27

1. Basic identifying details

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Approving body and date	Management Committee, 3 March 2020

Name	RUCT code	Year implemented*	Validation	Modification	Accreditation
PhD programme in the Information and Knowledge Society	5600386	2013/2014	25/09/2013	14/03/2016	15/10/2019
PhD programme in Education and ICT (E-learning)	5600387	2013/2014	23/07/2013	14/03/2016	15/10/2019
PhD programme in Network and Information Technologies.	5600006	2013/2014	28/12/2012	14/03/2016	15/10/2019
PhD programme in Bioinformatics (UAB, UPC, UdG, UdL, UOC, UVic-UCC)	5601327	2017/2018	11/07/2017	-	-

* The PhD programme in the Information and Knowledge Society and the PhD programme in Education and ICT (E-learning) were revalidated in the 2013/2014 academic year

2. Report authors

The Doctoral School's centre monitoring report has been written by the Doctoral School's director, with the support of the Management Committee, whose members are as follows:

- Dr Joan Pujolar Cos (coordinator of the PhD programme in the Information and Knowledge Society).
- Dr Elena Barberà Gregori (coordinator of the PhD programme in Education and ICT [E-learning]).
- Dr Ferran Adelantado Freixer (coordinator of the PhD programme in Network and Information Technologies).
- Dr Ángel A. Juan Pérez (coordinator of the interuniversity PhD programme in Bioinformatics [UAB, UPC, UdG, UdL, UOC, UVic-UCC]).
- Ms Marga Franco Casamitjana (programme manager).

This report was based on the individual PhD programmes' monitoring reports. These reports' content was drafted in turn by the corresponding academic committees in accordance with the following procedure:

- The data to be assessed in drawing up the reports were analysed.
- The report's preliminary version was drafted by the programme coordinator, taking into account the information provided by each teacher.
- The respective academic committees met to discuss this preliminary version.
- The report was reviewed and closed, taking into account the contributions made within the respective academic committees.
- The report was delivered to Planning and Quality.

Subsequently, the completed programme monitoring reports underwent the following process:

- The reports were evaluated by Doctoral School's Executive Board prior to commencing work on the preliminary draft of the centre monitoring report.
- Having completed the preliminary version of the report, it was forwarded to the contact person at Planning and Quality.
- The Doctoral School's management made the appropriate amendments, based on the feedback received from Planning and Quality.
- Finally, the finished report was reviewed and presented at the meeting of the Management Committee (see section 1, "Identifying data"), and was validated and approved on 3 March 2020.

3. Follow-up of the external assessment processes' requirements and recommendations

See the improvement actions document.

4. Assessment of compliance with the monitoring standards

4.1. Standard 1. Quality of the training programme

The study programme design (research lines, skills profile and training activities) is current according to the requirements of the educational field and it meets the required level of study according to the MECES.

1.1. The programme has mechanisms in place to ensure that the admission profile of PhD students is suitable and that the number of students is consistent with the characteristics and distribution of the programme's research lines and the number of places available.

1.2. The programme has suitable mechanisms in place for supervision of PhD students and, where applicable, of training activities.

	Progressing towards excellence	Compliant	Compliant with conditions	Non-compliant
PhD programme in the Information and Knowledge Society	X			
PhD programme in Education and ICT (E-learning)		X		
PhD programme in Network and Information Technologies	X			
PhD programme in Bioinformatics (UAB, UPC, UdG, UdL, UOC, UVic-UCC)		X		
Overall assessment	X			

Analysis and assessment

In general, the centre has a number of relevant strengths that help the standard progress towards excellence. Specifically, these strengths are the following:

- The demand increases every year. The selection processes have become more demanding each year, and the students' profile is increasingly aligned with the research lines and the specific thesis proposals offered.
- Overall, there is an increase in PhD students enrolled on financially supported industrial doctorate programmes, which in turn enables increased knowledge transfer to society of

the research carried out by the UOC's researchers.

- Actions have been undertaken jointly with the corresponding faculties to improve the gender perspective in those programmes where the ratio was significantly below average.
- The competency of global ethical commitment has been included, articulated in the form of a request sent to the UOC's Ethics Board to review the students' research plan. When submitting their research plan, students also submit the review request, undertaking to adopt the recommendations included in the Board's assessment of their plan. Prior to this change, students only signed the doctoral candidate agreement, which continues to be mandatory.

The most significant aspects of each of the programmes are outlined in the sections that follow.

PhD programme in the Information and Knowledge Society

The programme has improved the admission process to fine-tune the match with the thesis proposals and improve the information provided to students. The distribution of students by research lines is reasonable considering the teaching staff available for each line.

The number of students admitted is matched to the number of places available (35). This is confirmed by the data for the last three academic years (36, 35 and 33 students, respectively). The participation of foreign students remains constant at approximately one-third of the programme's total student count. Given the nature of the lines comprising the programme, this is considered satisfactory.

The programme is highly interdisciplinary, admitting students from very varied degree programmes, mostly from other universities.

PhD programme in Education and ICT (E-learning)

The programme applies the same admission mechanisms that were submitted in the 2018 self-assessment report for accreditation. These mechanisms guarantee suitability of the admission profile, as confirmed by the accreditation committee, which assessed them as satisfactory. The surveys show that the definition given to the research lines at the time of admission is correct (70% satisfaction rate).

Student monitoring has been enhanced with a complete, personalised review of their track record. Based on this review, they are advised as to the most important tasks that remain to be completed, or which are required for planning their immediate future. In addition, the monthly on-site research seminars are maintained. These seminars are aimed at grantholders and basically deal with research aspects; they are given by members of the University's faculty. The monitoring is completed with two assessment points – before a three-member panel, either face-to-face or synchronously online – of the work carried out during the last year.

PhD programme in Network and Information Technologies

The demand continues to grow for this programme, with a 9% and 13% increase in the 2017/2018 and 2018/2019 academic years, respectively. The number of students who have received grants to take part in the industrial doctorates programme has also increased (2 projects were given grants in the 2017/2018 academic year). Overall, the percentage of grantholding students tends to be lower as a result of the increase made in the number of places three years ago, which has enabled more part-time students to enrol. The present values are increasingly similar to those expected for steady-state conditions.

The programme added a new research line in the 2017/2018 academic year, called *Complex Systems*, and a further research line during the 2018/2019 academic year, called *Data Science*. These changes were described in the 2018 accreditation report.

The results of the satisfaction surveys are very positive; 66.7% and 81.3% of the students give a score of between 4 and 5 (on a scale from 1 to 5) to the support received from the thesis supervisors (in the two years assessed in this monitoring report).

Specific actions have been carried out in the programme targeting the gender perspective, related with the Doctoral School and the Faculty of Computer Science, Multimedia and Telecommunications, where most of the thesis supervisors come from:

- The institutional, academic and scientific communications made by the Doctoral School and the PhD programmes apply a gender perspective in order to avoid gender biases.
- The Faculty of Computer Science, Multimedia, and Telecommunications, which provides the PhD programme's teaching staff, awards the *equit@T* prize (<http://premi-equitat.uoc.edu/>), which fosters the participation of women in the technological aspects of the ICTs with the goal of increasing their presence in both the academic and professional worlds. This prize was awarded for the 4th year in 2019.

Of the 21 PhD theses that have been defended in the PhD programme, 5 have been written by women (23.8%). However, 50% of the special awards for PhDs have been given to women.

Starting in the 2019/2020 academic year, the information about new PhD students will include their gender in order to improve the quality of the analysis.

PhD programme in Bioinformatics (UAB, UPC, UdG, UdL, UOC, UVic-UCC)

It is still too early to assess this programme, due to the short time that has passed since it was started and the small number of students contributed by the UOC to this interuniversity programme. In particular, this programme differs from the others in the half-yearly research

seminars organised for grantholding students. These seminars basically cover research aspects and are given by University faculty, to whom students can address any questions during the data analysis process that forms part of their thesis. This exercise has led to the creation of a network of teachers affiliated with the programme, who, in many cases, are not PhD thesis supervisors.

Even though this programme is given online, two annual on-site or synchronous assessments are planned in which students must defend the work carried out during the previous year (specifically, years 2 and 4) before a three-member panel. Apart from assessing students' skill in oral presentations in English, this practice encourages them to continue in the programme, due to the constructive feedback received from the panel.

Strengths

The centre has the following strengths, which are new with respect to previous reports and which are listed in the overall assessment:

- The demand increases every year. The selection processes have become more demanding each year, and the students' profile is increasingly aligned with the research lines and the specific thesis proposals offered.
- There is an increase in PhD students enrolled on financially supported industrial doctorate programmes, which in turn enables increased knowledge transfer to society of the research carried out by the UOC's researchers.
- Actions have been undertaken jointly with the corresponding faculties to improve the gender perspective in those programmes where the ratio was significantly below average.
- The competency of global ethical commitment has been included, articulated in the form of a request sent to the UOC's Ethics Board to review the plan.

Improvement areas

The centre plans the following improvement areas:

- Improve coordination with the administrative and academic procedures teams, to scale up the review of candidates' CVs in line with the growing demand.
- Complete the new distribution of PhD programmes with the addition of two new programmes coordinated by the UOC (PhD degree in Health and Psychology and PhD degree in Humanities and Communication):
 - Admission mechanisms must be established for each one.
 - The existing programmes must be resized and adapted to the new distribution of lines in order to avoid redundancies. The changes will have a profound impact on

the current programmes and it may be necessary to revalidate the PhD programme in the Information and Knowledge Society.

4.2. Standard 2. Relevance of public information

The institution appropriately informs all stakeholders of the PhD programme's characteristics and the management processes for quality assurance.

2.1. The HEI publishes truthful, complete, up-to-date and accessible information on the characteristics of the PhD programme, its operational delivery and the outcomes achieved.

2.2. The institution guarantees easy access to relevant information on the PhD programme for all stakeholders, which includes monitoring and, where applicable, accreditation outcomes.

2.3. The HEI publishes the IQAS which forms the framework of the PhD programme.

	Progressing towards excellence	Compliant	Compliant with conditions	Non-compliant
PhD programme in the Information and Knowledge Society		X		
PhD programme in Education and ICT (E-learning)		X		
PhD programme in Network and Information Technologies		X		
PhD programme in Bioinformatics (UAB, UPC, UdG, UdL, UOC, UVic-UCC)		X		
Overall assessment		X		

Analysis and assessment

Overall, few changes have been made with respect to previous accreditation reports. This section outlines the most significant aspects that have undergone changes.

The University has a publicly available internal quality assurance system (IQAS). As with all its programmes, the University offers detailed information on the programme's website, including the data concerning accreditation and monitoring. Both the monitoring reports and the accreditation reports are public and accessible in PDF format.

Currently, it is possible to access the researchers' CVs from a link on the Doctoral School's website. Exceptionally, in the case of the interuniversity PhD programme in Bioinformatics (UAB, UdG, UdL, UOC, UVic-UCC), the researchers' CVs have not yet been linked to the website. This will be done during the next period. However, the centre believes that further improvements need to be made to the format in which this CV information is made public. Specifically, it is necessary to redesign the researchers' web pages applying institutional criteria, so that the information concerning publications, research subjects, competitive projects, etc., is shown uniformly, with automated transfer from the UOC's publications database (Researchers' Website [GIR] tool) and intelligibly, in line with the UOC's brand principles.

It is also necessary to improve the information published concerning the visibility of the satisfaction results, the most significant research outcomes for each programme and the employability surveys, which currently exist only in aggregate format. These improvement actions had already been described in the accreditation report, and are currently under review, with a slight delay in implementation.

Given this improvement's institutional scope, it goes beyond the competencies of the Doctoral School, and is already in the pilot phase.

Strengths

The information about the programmes is now complete and has been rated positively in the accreditation processes.

Improvement areas

An institutional-scale improvement is required in the presentation of the UOC researchers' CVs. This action will enable links to be made to individual researcher's web pages, using the data contained in the internal systems for registering publications, research projects and research activity in general (Researchers' Website [GIR] portal). The data can be uploaded automatically, and the researcher's web page will have an accessible, standardised format that is in line with the UOC's brand regulations. The action is already in pilot phase and is being implemented by the UOC Knowledge Transfer and Research Support Office (OSRT).

Although the action is beyond the Doctoral School's competencies, once the final version has been published, the links to the researchers on each programme's website will need to be updated:

4.3. Standard 3. Efficiency of the internal quality assurance system

The HEI has a functioning internal quality assurance system that has a formal status and assures the quality and continuous enhancement of the PhD programme in an efficient way.

3.1. The IQAS implemented facilitates the processes for the design and approval of the PhD programme, its monitoring and its accreditation.

3.2. The IQAS implemented ensures information and relevant outcomes are compiled for effective management of the PhD programmes.

3.3. The IQAS implemented is reviewed periodically in order to analyse its suitability and, where applicable, an enhancement plan is put forward in order to optimise it.

	Progressing towards excellence	Compliant	Compliant with conditions	Non-compliant
PhD programme in the Information and Knowledge Society	X			
PhD programme in Education and ICT (E-learning)		X		
PhD programme in Network and Information Technologies		X		
PhD programme in Bioinformatics (UAB, UPC, UdG, UdL, UOC, UVic-UCC)	X			
Overall assessment		X		

Analysis and assessment

This standard has undergone few changes with respect to the work that had been done in previous accreditation periods. Information about the perception of this standard is provided in each programme's monitoring reports. In most cases, this perception is positive or very positive. The new IQAS manual has been already been used successfully to accredit the three programmes coordinated by the UOC, and also to validate the interuniversity PhD programme in Bioinformatics (UAB, UPC, UdG, UdL, UOC, UVic-UCC), prior to the dates of this monitoring report.

As regards the data, the programmes state that the data collection processes were systematised during the 2018/2019 academic year and the data are analysed jointly with the additional data requested by the Doctoral School. It is in this data collection process that certain changes have been made, for example, in the questions with open text answers that have been added to the satisfaction surveys. These questions help improve the programmes' quality in that

they provide information about specific problems that affect the PhD students (which was difficult to collect with the previous format).

The modification of the data collection system is relatively recent. Even so, the UOC has carried out an internal audit during the 2018/2019 academic year to review all the quality processes. The auditors have made some comments that have entailed minor changes in the processes' indicators (in particular, in two PhD programme processes). It is a minor modification that adjusts these indicators to those that are considered indispensable in AQU Catalunya's monitoring and accreditation guides.

The main improvement area for this standard concerns the public visibility of this information, linking it with the improvement of the research website and the presence of references to the satisfaction data in the same section of the Doctoral School's website.

Strengths

- A relatively new system, but apparently well consolidated.
- Regular and systematic review of the indicators.
- Improvements in the quality of the data obtained systematically.

Improvement areas

- Improvement of the website's public information. We have already mentioned this in standard 2; in this case, it concerns the website for the Doctoral School's programmes.
- Improvement in the automation of the data acquisition tasks, reducing the need for human involvement.

4.4. Standard 4. Suitability of teaching staff

Teaching staff are both sufficient and suitable in accordance with the characteristics of the PhD programme, the scientific field and the number of students.

- 4.1. Teaching staff have accredited research activity.
- 4.2. Teaching staff are sufficient in number and work a suitable number of hours in order to perform their functions.
- 4.3. The PhD programme is supported by suitable actions in order to promote thesis supervision and PhD student tutoring.
- 4.4. The level of involvement of foreign teaching staff and international doctors in monitoring committees and thesis assessment boards is suitable for the programme's scientific field.

	Progressing towards excellence	Compliant	Compliant with conditions	Non-compliant
PhD programme in the Information and Knowledge Society		X		
PhD programme in Education and ICT (E-learning)		X		
PhD programme in Network and Information Technologies		X		
PhD programme in Bioinformatics (UAB, UPC, UdG, UdL, UOC, UVic-UCC)		X		
Overall assessment		X		

Analysis and assessment

This standard requires performance of an individualised assessment for each programme. In spite of this, the varying levels of maturity between the programmes and the notable differences between the fields of knowledge suggest the comparative assessment between centres we describe here.

The teaching staff with accredited research (measured in terms of valid six-year reviews [sexennials]), is slowly increasing (or, at the very least, it is not decreasing). In some programmes, the increase is significant, which leads us to think that excellence will be attained in the not too distant future.

The involvement of foreign teaching staff is significant, although it would be desirable to increase it further with the goal of establishing alliances that would enable growth in research activity and resource generation.

The level of student satisfaction shown in the surveys is high, almost always above 80% (see the monitoring reports for the individual programmes), which provides a good incentive to continue applying the measures that were put in place in previous semesters (cohort tutorials, admission tutorials or creation of the Student Council).

The Doctoral School is fully integrated in the University's affiliated teaching staff recruitment procedure and, until now, it has covered all needs, the preparation of training activities and coordination in obtaining this standard's data.

PhD programme in the Information and Knowledge Society:

The programme has experienced an improvement in the teaching staff's accredited research (all of the participating teaching staff hold PhDs and the total percentage of staff with valid six-year reviews [sexennials] exceeds 60%) and in the teaching staff's participation in funded projects (which has increased from 72% in the previous period to 83% in the current period). The involvement of foreign teaching staff remains stable (the percentage of thesis co-supervisions with teaching staff from foreign universities is almost 8%, and 35% of the members of thesis committees are foreign).

The programme keeps the data on teaching staff involvement up to date, with an average of 1.42 theses supervised per teacher. This value is interpreted positively in the light of the average of 1.48 theses per teacher reported in the previous period, as it means that an increasing number of accredited teachers are taking part in supervision tasks. Currently, 45 theses are being co-supervised (out of a total of 115 theses). Even so, the programme is remaining watchful to prevent a small group of teachers from handling the majority of thesis supervisions.

The programme maintains the good practices outlined in previous reports, such as providing training to junior supervisors, either in personalised sessions given by the programme coordinator or in the form of external training (Soft Skills course for thesis supervisors), and ensures that the research performed by the research groups aligns with the interests of the grant candidates.

As regards assessment, the programme takes steps to ensure the presence of external assessors on the thesis assessment boards. The level of involvement of PhD degree holders from non-Spanish universities in the thesis supervisory committees is 0.297 per student. The level of involvement of PhD degree holders from Spanish universities in the thesis assessment boards is 0.5 per student.

Student satisfaction rates are very high (on average, above 4 on a scale from 1 to 5).

PhD programme in Education and ICT (E-learning):

The programme maintains the levels of accredited teaching staff above the required 60% (64.5% and 60.93% during 2017/2018 and 2018/2019 academic years, respectively), and the involvement of foreign teaching staff is stable within the values of the previous accreditation report. Student satisfaction rates are also high (above 80%).

As regards training, in addition to the activities that have already been mentioned for the PhD programme in the Information and Knowledge Society, the PhD programme in Education and ICT (E-learning) also organises seminars with content that is necessary for preparing the PhD

thesis, such as the R, R Commander or MAXQDA seminars, or more interdisciplinary seminars (ethics in research, how to apply for EU projects or dissemination of research).

PhD programme in Network and Information Technologies

The programme shows an upward trend as regards accredited research by the teaching staff, which now stands at the levels required for excellence (76%). Involvement of foreign teaching staff remains stable, but it is a possible area for improvement in the future. At present, 37% of the thesis assessment boards have a foreign member, and 25% of the students have a foreign member on the thesis committee.

The theses per supervisor ratio remains stable between 1.6 and 1.8, in line with the ratio given for the other programmes. It is not considered necessary to take any action in this respect.

Student satisfaction levels, in line with the other programmes, exceed 80%, and the training activities have not undergone any changes other than those that have already been mentioned.

PhD programme in Bioinformatics (UAB, UPC, UdG, UdL, UOC, UVic-UCC)

The programme has a small number of participating teaching staff, but with a very high level of accredited research activity (100% have valid six-year reviews [sexennials]). The involvement of foreign teaching staff is still nil, because no PhD theses have yet been examined and the programme does not use thesis committees in the assessment; this role is performed by an interuniversity committee.

Strengths

- Progressive increase of teaching staff with accredited research.
- High ratings in student satisfaction surveys.
- Training activities for PhD thesis supervision.

Improvement areas

- Insofar as this is possible, increase the involvement of foreign teaching staff in the programmes, although it is not a priority goal for the Doctoral School.

4.5. Standard 5. Effectiveness of learning support systems

The physical resources and services needed to deliver the activities envisaged in the PhD programme and for the training PhD students are sufficient and suitable in accordance with the number of PhD students and the characteristics of the programme.

5.1. The available physical resources are adequate for the number of PhD students and the characteristics of the PhD programme.

5.2. Services available to PhD students provide suitable support to the learning process and encourage access to the labour market.

	Progressing towards excellence	Compliant	Compliant with conditions	Non-compliant
PhD programme in the Information and Knowledge Society		X		
PhD programme in Education and ICT (E-learning)		X		
PhD programme in Network and Information Technologies		X		
PhD programme in Bioinformatics (UAB, UPC, UdG, UdL, UOC, UVic-UCC)		X		
Overall assessment		X		

Analysis and assessment

This standard should be assessed for the centre as a whole, aggregating the strengths and weaknesses detected in each of the 4 programmes.

First of all, there have been significant changes in the satisfaction results (which were unsatisfactory in previous reports). Now, they range between 60% and 90% (depending on the programme) during the years that these programmes have been monitored. The effects brought about by these changes have been attributed to the role played by tutorial support, which has provided mentoring and improved the information available to students. The level of satisfaction with the learning resources has also increased very significantly.

However, it is seen that the satisfaction of the thesis supervisors is noticeably lower than that of the PhD students. This suggests that effort should be focused on the dissemination of internal information (among UOC teaching staff).

As regards the most immediate points for improvement, the need for a campus environment that is more focused on doctoral activities stands out. In this respect, the Virtual Campus should have options for including activities that last for longer than one semester, options that enable agents outside of the University (typically, all of the members of the thesis committees, including the external members) to evaluate the activities, and a mechanism for using the activities' results to generate indicators for the assessment processes. At present, this environment does not share common needs with the Virtual Campus used for bachelor's and master's degrees, and this renders it necessary to develop an *ad hoc* environment at high cost. Because of this and the very nature of thesis supervision itself (individual projects, often with a one-to-one interaction), there is room for improvement in students' perception of the Virtual Campus.

As regards the Library service, the qualitative feedback is positive. Currently, the Library is offering free seminars on how to find information and how to use the article indexing query tools. These competencies are essential for researchers in training. In the specific case of the interuniversity PhD programme in Bioinformatics (UAB, UPC, UdG, UdL, UOC, UVic-UCC), which has been created from scratch, certain specific literature needs are mentioned (data science books in Python or R that have been published recently) that will be solved in the immediate future.

Strengths

- Increased satisfaction (in general) in most areas (satisfaction with the programme, with the resources or with the Virtual Campus).

Improvement areas

- Improve internal dissemination of information about the PhD programme's processes. Improvement actions will be required to improve the satisfaction of the thesis supervisors.
- Improve the campus tools available for the PhD programme:
 - There is already an improvement action in progress that impacts on the new SIS (information system) and proposes alternatives while the SIS is unavailable (it is not expected to be on-stream in the next monitoring period).

4.6. Standard 6. Quality of programme learning outcomes

PhD theses, training activities and assessment are consistent with the education profile. The quantitative results in terms of academic indicators and access to the labour market are suitable.

6.1. PhD theses, training activities and their assessment are consistent with the intended training profile.

6.2. The values for the academic indicators are adequate for the characteristics of the PhD programme.

6.3. The values for the graduate labour market indicators are adequate for the characteristics of the PhD programme.

	Progressing towards excellence	Compliant	Compliant with conditions	Non-compliant
PhD programme in the Information and Knowledge Society		X		
PhD programme in Education and ICT (E-learning)		X		
PhD programme in Network and Information Technologies	X			
PhD programme in Bioinformatics (UAB, UPC, UdG, UdL, UOC, UVic-UCC)	X			
Overall assessment		X		

Analysis and assessment

The learning outcomes achieved in the programmes clearly depend on each programme's level of maturity at the time of writing this report. An assessment is provided for each programme, taking into account the data that have been reported and the specific features of each knowledge area, which also condition the outcome indicators.

One feature that is common to all the programmes is the need to evaluate more explicitly the acquisition of MECES-level competencies. Currently, the point where this assessment is most explicit is the oral examination and defence of the thesis, with a specific rubric.

Another feature that is common to all the programmes is the fact that the labour market access data were already submitted in the accreditation process. AQU Catalunya carries out a survey every three years on the labour market access of PhD degree holders in Catalonia, using the aggregate data of all of the University's programmes. As the sixth and last survey was performed in 2017, there are no up-to-date data available. It is expected that the survey will be

repeated this year.

Summarising the conclusions of the accreditation reports prior to this follow-up, the functions performed by PhD degree holders are closely associated with the workplace: those with the closest match work in research centres or the university. Almost half of the PhD degree holders work in companies, performing research-related tasks. The degree of attainment of competencies is high and matched to the challenges of highly innovative research; the unemployment rate among PhD degree holders is very low. The Doctoral School has started to assess the labour market access of the students who graduated in 2017; this assessment will be repeated every three years. This study complements the previous study, as it segregates the results for each programme. Furthermore, the Doctoral School is currently involved in a study of the UOC's PhD degree holders aimed at ascertaining their present situation from both the professional and research viewpoints, and also to establish ongoing contact after the University's 25th anniversary.

PhD programme in the Information and Knowledge Society:

As regards the academic indicators, 7 theses have been defended in the programme in each of the two years included in this report. Of these, 2 and 1, respectively, correspond to students enrolled full-time. An important point to make is that the number of full-time theses is influenced by the fact that many students defend their thesis shortly after their grant expires. This has an impact on the indicator because the thesis immediately becomes part-time upon expiry of the grant. Even so, the indicator shows an upward trend and it is expected to grow even more as the increase in the number of admission places requested in 2014 (from 20 to 35 places) becomes consolidated. The average time taken to complete the thesis is 8.12 semesters full-time and 10.83 semesters part-time. A total of 85% of graduates have said in the survey that they would choose the same university if they were to do the thesis again, which indicates a very high satisfaction rate. The drop-out rates in the years under assessment are 11% and 7%, respectively. These are reasonable figures considering that they are programmes where most of the students are part-time.

As regards the thesis assessment, 57% of the theses are distinguished with *cum laude* (the figure is the same for both years). This is justified by the fact that the distinction is now voted anonymously; it is no longer given publicly but has now become the result of an objective assessment. In addition, 29% of graduates have requested the international mention.

The use of research stays has become a generalised practice. 3.1% and 4.1% of the programme's students, respectively, have performed a research stay during each of the two years under assessment. This includes almost all of the full-time students who have been awarded a grant, as they benefit from the Doctoral School's financial support policy.

The scientific outcomes associated with the PhD theses that have been defended are

satisfactory for the full-time students (1.4 JCR-indexed articles and 10 congresses), and more modest for part-time students (0.42 JCR-indexed articles and 1.9 congresses on average).

As regards satisfaction and access to the labour market, 75% of the 80 students who answered the survey said that they fully or substantially agreed that they were able to apply professionally the knowledge and skills acquired during programme. There are no official data on labour market access from the Government of Catalonia. This survey is carried out every 3 years. The last survey was performed in 2017 and gave highly positive data for labour market access and satisfaction in the case of this PhD programme (this has already been discussed in the accreditation reports).

PhD programme in Education and ICT (E-learning)

With respect to the results dimension, 4 and 2 theses were defended, respectively, during the 2-year monitoring period (3 full-time and the rest part-time in the 2017/2018 academic year). Half of the theses were awarded the *cum laude* distinction in the 2017/2018 academic year and all of them in the 2018/2019 academic year. These values should be viewed with caution, given the small number of thesis defences made. Half of the students who graduated during these two years requested the international mention. This fact is noteworthy, as in most cases the theses are carried out part-time and the grants do not cover these costs. This fact is also linked to the research stays, of which there were 5 in each year. This is a positive value, considering that only full-time students with a grant have access to funding for this.

With respect to the academic outcomes, the students who graduated in the 2017/2018 academic year published 3.25 articles on average; the students who graduated in the 2018/2019 academic year published 3 articles on average. The average time to complete these theses is 8 semesters for part-time students and 6 semesters for full-time students. This matches the duration of the UOC grants and the Agency for Management of University and Research Grants' (AGAUR) FI grants.

Students' satisfaction with the programme ranges from 60% to 80%, and the satisfaction with the supervisor-affiliated teaching staff ranges from 66.7% to 100%. Students' satisfaction with supervisors has been 86% and 76% in the last two years.

As regards drop-outs, although this is not worrying, the programme is undertaking specific actions to keep track of theses that are on hold (students who for personal, work or family reasons have asked to temporarily leave the programme), as they can end up becoming drop-outs without adequate follow-up.

As has been mentioned, the labour market access report was prepared during the previous assessment period; the next report is scheduled for this year 2020. The previous data show a high degree of satisfaction with the skills acquired; this fact was already highlighted in the

accreditation report.

PhD programme in Network and Information Technologies

The number of PhD theses defended in the programme shows similar figures to the previous period (4 and 6 in the two years monitored). The fact that the percentage of part-time theses is greater than the percentage of full-time theses in the total number of defended theses is not seen as negative. This perception is similar to the other programmes. Even so, actions are continuing to access sources of funding that will enable the number of grants to be increased for full-time students. The defended theses that have been awarded a *cum laude* distinction accounted for 66% and 80% of the total during the two-year monitoring period. These figures are considered normal since implementation of the new anonymous mark review methodology. A total of 9.52% of graduates asked for the international mention. This is a relatively low figure but justified by the fact that only full-time students have funding for stays (a necessary condition to obtain the mention). Even so, there is room for improving the number of stays performed by full-time students (there has been only one stay during the 2018/2019 academic year).

As regards the academic outcomes, the defended theses are of high quality. For each thesis, an average of 2.19 articles are published in JCR-indexed journals, an average of 1 article in journals that are not JCR-indexed, and 5.23 proceeding papers. The theses have a duration of 2.92 years full-time and 3.59 years part-time. These values are very positive compared with the rest of the system.

Student satisfaction stands at 75% and the drop-out rates are 5% and 10% in the two years monitored. These are low rates for the programme's subject area.

PhD programme in Bioinformatics (UAB, UPC, UdG, UdL, UOC, UVic-UCC)

The programme is in the early stages of implementation. 100% of the PhD students are part-time, which makes the presence of research stays or future applications for the international mention extremely unlikely. It is still too soon to assess the academic or drop-out indicators, as there are no theses ready yet for defending and no students have dropped out from the programme. However, good results are observed for publications by students in high-impact journals, which raises expectations of high success rates in the near future.

Strengths

The centre observes the following strengths in its programmes:

- A good publications ratio and good average academic outcomes per PhD student.
- Good satisfaction results.
- Controlled drop-out rates, in spite of most PhD students being part-time.
- Good historic results as regards labour market access.
- A drop in the percentage of theses with *cum laude*, which shows that the change of protocol in the anonymous assessment of this distinction was necessary.

Improvement areas

- In order to improve the percentage of stays and international mentions (which are closely linked to the stays), it would be necessary to increase the percentage of full-time PhD students and increase the number of funded predoctoral contracts.
- Up-to-date labour market access data are lacking.

5. Assessment of the programmes

The Doctoral School is in a phase of consolidation, after six years in operation. During this period, the priority has been to establish the internal protocols that facilitate the admission, assessment and monitoring of all the students enrolled on the affiliated programmes, applying the necessary influence to harmonise internal processes and put in place the necessary quality processes. This phase has been completed successfully and has culminated in the accreditation of all 3 programmes. From this point onwards, a new phase begins in which, by analysing the programme monitoring process, it should be possible to focus effort on correcting and maintaining the quality of the programmes offered.

During this monitoring, a number of strengths have been identified that are common to all the programmes:

- The yearly increase in demand and the interest shown by students in our programmes, with an excellent level of internationalisation.
- The increased transfer with the funding obtained from the industrial doctorate programme and the Innovative Training Networks (ITN).
- The significant increase, in general, of teaching staff with accredited research.
- High ratings in student satisfaction surveys.
- The enhancement of training activities for PhD thesis supervision.

- Very good results in terms of scientific output in the PhD theses that have been defended.

There are also a number of general aspects that need to be improved and which are included in this report, such as:

- The need for technological support in the Virtual Campus to cater for what should be a doctoral classroom, with the milestones and the assessment and monitoring criteria.
- An increase in teaching staff with valid six-year reviews (sexennials) so that all the programmes can opt for the mention of excellence.
- Improvement of the published information, considering its content (for example, the researchers' CVs), or the intended audience, internal (for example, information for researchers) or external (supplementary information for stakeholders).

One important point is the fact that the programmes are in different stages of maturity, from the PhD programme in the Information and Knowledge Society, which will soon have accumulated 20 years of history, to the interuniversity PhD programme in Bioinformatics (UAB, UPC, UdG, UdL, UOC, UVic-UCC), which began only two years ago and has no graduates as yet. Therefore, the above considerations should be assessed on a case-by-case basis.

Finally, although it is outside of the scope of this monitoring report, it is worth mentioning that the Doctoral School is preparing to make changes to the core of its programme structure, with the future creation of 3 new PhD programmes that will complete the portfolio and will help assist in developing the strategic research plans for all of the UOC's faculties. In particular, 2 new PhD programmes will start in the 2020 academic year: the PhD programme in Humanities and Communication and the PhD programme in Health and Psychology. In addition, the UOC will take part in another 2 interuniversity programmes: the PhD programme in Business Administration and Management (UPC, UPM, UPCT, UOC) and the PhD programme in Tourism (UMA, UA, UCA, UCM, UEX, ULL, Nebrija, UOC, URJC, USC, US, UVIGO). These far-reaching changes will render it necessary to carry out an in-depth review of the PhD programme in the Information and Knowledge Society and perform a comprehensive restructuring of the research lines.

The following pages give the assessment made by each programme coordinator on the basis of the analysis of each standard's strengths and weaknesses:

PhD programme in the Information and Knowledge Society

As is apparent from the recently concluded accreditation process, the programme amply meets the required standards. It should be pointed out that a large number of the improvement recommendations proposed in this accreditation were already being

implemented and, consequently, the vast majority of the improvements have already been attained.

Looking toward the future, as explained in section 6, the Doctoral School and the University have reappraised this programme's size in terms of number of students and scope of coverage of the different research groups' activities (two aspects that elicited comments from the external accreditation assessors at the time). This reappraisal will entail a far-reaching reform of the programme. In practice, this will lead to the exit of several research groups and the creation of new, more cohesive and better dimensioned programmes.

In any case, the programme has a very solid basis as regards the research groups' profile and also with respect to the formalisation of the quality assessment and monitoring processes. If it were not for this forthcoming reform, it would be possible to enter the progressing towards excellence phase by means of a series of key improvements.

The improvements that have been identified as necessary do not only affect just this programme but also, in fact, the overall functioning of all the University's programmes. Consequently, it would make sense to implement them during the phase-out process. There are 2 main improvements:

- Systematic implementation of activity design and assessment and learning by competencies in all processes that have a learning content or intention.
- Implementation of a specific virtual learning environment for project design, execution, monitoring and assessment.

The other improvement proposals – except the aspects that are not teaching-related, such as the publication of information on the Virtual Campus or the specific definition of a monitoring criterion – address specific issues arising from the remaining shortcomings in these two aspects, whose solution could signify a very big leap forward in the programmes' quality. For example, we consider that these measures will have a substantial impact on some of the improvable indicators, such as the satisfaction with the thesis supervisors or the scientific outcomes of graduates who have completed their thesis part-time.

PhD programme in Education and ICT (E-learning)

The overall assessment of the PhD programme in Education and ICT (E-learning) for the period under analysis is considered satisfactory after having examined the six dimensions proposed in the report.

Taking into account the programme's recent accreditation, we have a reference assessment that confirms the present solidity of the programme and its components for ensuring continuity of the high results obtained, and in particular, the positive ratings of the

programme's monitoring mechanisms; specifically, we draw attention to the students' ratings of the thesis supervisors, for which we had no specific data until now.

We consider that these monitoring mechanisms, composed of a series of stakeholders and resources (tutors, infrastructures, pathways, academic committees, annual assessments, etc.), form the programme's backbone, show a robust performance and benefit from a growing demand for the programme. This in turn enables us to select candidates with a good fit, applying the admission mechanisms designed by the Doctoral School. At the end of the process, the quality of the PhD students' results provides further endorsement of the work carried out in the programme, considering the marks obtained, the scientific publications in high-impact journals in the field of study and the work performed subsequently as graduates of the programme.

We would highlight that many of the improvement recommendations that may be considered after analysing the dimensions included in this report are aligned with those made during the recent accreditation process. Accordingly, it could be considered, to some degree, that they are currently undergoing implementation and improvement (see the last table in the annexes on the status of the results of the improvement proposals recommended in the programme's accreditation), although no substantial changes are foreseen in the programme's approach and development. Consequently, while no significant changes are expected in the programme, the path that should be followed to improve it seems to be clearly laid out.

Specifically, and in continuity with the improvement actions that enable results to be achieved that are progressing towards excellence, we highlight:

- The programme's internationalisation, with the inclusion of a number of agents from foreign institutions, such as supervisors, co-supervisors, assessors and members of thesis assessment boards, as approximately half of the programme's students come from other countries.
- Obtainment of grants outside of the University, as the growth of new doctoral programmes may have the effect of reducing the grants awarded to the PhD programme in Education and ICT (E-learning). In addition, it has been seen that the mere fact of having a grant is associated with achieving better academic outcomes, both as regards the final marks and (international) thesis citations and in the students' impact publications.
- The progressive implementation of communication improvements both within the programme and within the Doctoral School, highlighting specifically the need for a more flexible and transparent website and the creation of a strong online doctoral community.

PhD programme in Network and Information Technologies

After analysing individually the 6 standards, the overall assessment of the programme shows that the quality goals have been attained. Specifically, the PhD programme in Network and Information Technologies and the Doctoral School have analysed the programme's different quality dimensions and have agreed that 4 of the standards are compliant and the remaining 2 are progressing towards excellence. Improvement actions have been started or continued that enable progress towards excellence in the dimensions where improvable aspects have been detected.

With respect to standard 1, quality of the training programme, demand is increasing steadily. Furthermore, although it is not uniform, the distribution of students among research lines is matched to the thesis supervision capacity of the research groups that sustain the research line. The number of UOC-funded study grants has also been increasing in recent years, as planned in previous monitoring reports.

The programme's good position in this dimension is reflected in the overall rating given by the PhD students both of the supervisors and their knowledge in their thesis' field of research, exceeding 80% in the last year analysed, 2018/2019.

Standard 2, relevance of public information, is compliant but requires certain actions that have been outlined in the report to attain compliance progressing towards excellence. Specifically, in this monitoring report, it has been stated that the public information about the programme and the research lines can be found easily on the Doctoral School's website.

However, with the aim of improving the visibility of the researchers' CVs and the programme's satisfaction results, the UOC is redesigning the research staff's personal pages and the research and innovation website: R&I. Once this new website has been rolled out, this standard will become compliant and progressing towards excellence.

With respect to the standard on the efficiency of the programme's internal quality assurance system, standard number 3, the monitoring report has detected the need to improve accessibility to the indicators for the PhD programme's teaching staff. Again, improvement of this point is linked to the UOC's new research and innovation website: R&I. Once this aspect has been improved, this standard will become compliant and progressing towards excellence.

The suitability of the teaching staff, analysed in quality standard number 4, is substantially compliant in all the dimensions. In spite of this, this monitoring report highlights the programme's intention to work toward a higher degree of internationalisation with the involvement of more foreign teaching staff. In addition, the PhD programme has been able to

recruit more junior teaching staff with experience in research, as confirmed by the higher percentage of teaching staff with valid six-year reviews (sexennials).

The effectiveness of learning support systems, which is analysed in standard 5, provides varying results. While students' satisfaction with the PhD programme is high, the thesis supervisors' satisfaction with the programme is significantly lower. Based on the results of the satisfaction survey performed among thesis supervisors, the Academic Committee understands that the main problem between the PhD programme and the thesis supervisors lies in the communication from the Doctoral School with the thesis supervisors, often involving administrative matters. The problem will be analysed to propose a solution.

The other aspect with a low rating is the Virtual Campus and its tools. In spite of its importance, the communication between the thesis supervisor and the PhD student is very different from the communication between the degree student and the course teacher (whether for bachelor's or master's degrees). The communication and the interactions are much more personalised and are carried out using synchronous channels. Therefore, it is not considered a serious problem. Overall, the quality standard is compliant.

Lastly, the analysis of standard 6 on the quality of outcomes gives compliance with excellence, mainly thanks to the scientific contributions per thesis and the average time taken to complete the theses (and all the indicators that are derived from this). The only aspect that is prioritised for improvement is the performance of research stays by the students and, consequently, the percentage of theses defended with an international mention.

Summarising the overall situation, this monitoring report portrays a PhD programme that achieves the quality goals and, in many aspects, is progressing towards excellence. The improvement actions are focused mainly on the visibility of specific information, which is already under development within the framework of an improvement of the UOC's R&I website, and the programme's internationalisation by means of research stays by the students and the recruitment of a higher percentage of foreign teaching staff.

PhD programme in Bioinformatics (UAB, UPC, UdG, UdL, UOC, UVic-UCC)

The programme is in a very early stage of implementation and it is still too soon to assess the results obtained from its activity. At present, there are no graduates and no drop-outs. A much more strategic view is taken to this programme as it provides a unique opportunity to pool the potential of most of the universities in the Catalan system in the field of bioinformatics and develop a learning programme driven by excellence jointly with Bioinformatics Barcelona (BIB). The fact that the Catalan universities have come to an

agreement to create this high-quality interuniversity programme, and by this means attract talent and transform Catalonia into a world leader in the field of bioinformatics, is considered highly positive. The UOC can make a very significant contribution through online thesis monitoring (part-time), providing a channel for research training to researchers who often work in hospitals, research centres or private companies operating in the health sphere. The transfer of research results seems to be guaranteed.

In spite of the fact that this programme is still very recent and it is too soon to draw reliable conclusions about its quality, it can be affirmed that the quality of student admissions is excellent. Based on the selected students' prior publications and their profile, it can be guaranteed that the resulting theses will have a high impact. The UOC teaching and research staff involved in the programme are also carefully selected, with excellent track records in research and PhD student training in data science and data analytics in bioinformatics, with 100% with valid six-year reviews (sexennials).

6. Improvement actions

See the improvement actions document.

Improvement Actions. Centre Monitoring Report. Doctoral School

Academic year 2017/2018 / 2018/2019

Follow-up of improvement actions implemented in previous years

PhD programme in Education and ICT (E-learning)

Standard	Improvement area	Weak point detected	Identification of reason	Scope	Objective to be accomplished	Proposed action	Time limit	Monitoring indicator	Person in charge	Status - Remarks
E.1.1.	Quality of the training programme	The high percentage of part-time PhD students lowers the quality indicators.	There is a low percentage of full-time PhD students.	Doctoral School	Increase the number of full-time PhD students.	Increase the number of UOC-funded grants.	2017-2021	Number of active PhD students with UOC-funded grant. An increase of between one and two PhD students is planned.	Doctoral School management Office of the Vice President for Strategic Planning and Research	Done. The action proposing that the UOC increase the number of grants has been carried out, raising the number of grants from 10 in 2016 to 15 in 2018. However, it should be pointed out that this number of grants is distributed between the three programmes currently given at the UOC; this means that the increase has been modest. However, during the 2020/2021 academic year, the number of grants has temporarily fallen again.
E.1.2.	Quality of the training programme	Technology transfer between PhD programme and enterprises can be improved.	The number of industrial doctorate students is low.	Doctoral School	Increase the number of industrial doctorate students.	Guide and foster the presentation of industrial doctorate proposals.	2017-2021	Number of new industrial doctorate students per year.	UOC Knowledge Transfer and Research Support Office Doctoral School	Done. There has been an increase in the number of industrial doctorate students in recent years, and the number of doctoral researchers in this field has tripled. This has been a direct result of the training and mentoring provided by the Doctoral School. However, it seems that the number of applicants for these grants has decreased during the 2019/2020 academic year.

Standard	Improvement area	Weak point detected	Identification of reason	Scope	Objective to be accomplished	Proposed action	Time limit	Monitoring indicator	Person in charge	Status - Remarks
E.1.3.	Quality of the training programme	There is a need for a sustained increase in the demand for admissions (although the current demand is satisfactory).	No cause is interpreted other than consolidation of the PhD programme.	Doctoral School	Achieve a sustained increase in the demand for admissions.	<p>Create a communication and dissemination plan for the Doctoral School.</p> <p>Phase 1: perform an analysis of focus group meetings and establish the channels.</p> <p>Phase 2: Create a communication and dissemination plan that identifies the most appropriate channels for reaching them.</p>	2019/20 academic year	Communication and dissemination plan completed.	<p>Doctoral School</p> <p>Communications</p> <p>Marketing</p>	Done. It is considered that the demand received by the programme is increasing, thanks to the actions performed by the Doctoral School. The accrued number of admission applications has increased from 109 in the 2016/2017 academic year to 199 in the 2018/2019 academic year.
E.1.4.	Quality of the training programme	The Internal Assessment Committee (IAC) identified the need to include more specific e-learning content in the courses, and also more courses on scientific research processes in social sciences.	More preparation and specialisation in the programme's specific field.	Doctoral School	Create specific courses in the field of e-learning, and also add courses on methodology and research techniques in social sciences.	Include better-aligned courses.	2018/19 academic year	Inclusion of courses.	Programme coordinator	Done. A new course has been created that complies with what was proposed in the self-assessment report, since: <ul style="list-style-type: none"> a) it is a course with specific e-learning content in all the modules and is framed within the context of social science research; b) it provides a module on methodological approaches in this field and ends with a real-life practice session on analytic learning that enables students to become familiar with current research procedures. Given the interest detected in this new course, it is taken by all the PhD students after having completed the first course on research, called <i>Research Design</i>, which introduces them to the

Standard	Improvement area	Weak point detected	Identification of reason	Scope	Objective to be accomplished	Proposed action	Time limit	Monitoring indicator	Person in charge	Status - Remarks
										research procedure that they must follow strictly. This course has the IAC's report and, in line with the committee's proposals, the comments made by the students themselves have been taken into account. In fact, a PhD student has been recruited as moderator for material based on a debate between experts on the Virtual Campus to introduce e-learning theories and models, thereby ensuring students' understanding and validating the interest that the content holds for them.
E.1.5.	Quality of the training programme	The PhD students must use an online environment, which follows a slightly different methodology.	There is a need to improve the feeling of connectedness with the University.	Doctoral School	Improve the feeling of connectedness with the University.	Implement a technology improvement plan for the spaces used for doctoral studies.	2019/20 academic year	Technological space adapted to the PhD programme.	Technology eLearn Center Doctoral School	Pending. Within the framework of this technological improvement, two stages have been undertaken to develop a specific tool for the PhD students, as they do not use the Virtual Campus in the same way as the other students. The first stage consisted of a development using the Slack platform, in which communication channels were designed in different areas and on different levels (Doctoral School, programme, group of PhD students in the same year, courses), the purpose of which is to foster

Standard	Improvement area	Weak point detected	Identification of reason	Scope	Objective to be accomplished	Proposed action	Time limit	Monitoring indicator	Person in charge	Status - Remarks
										integration and knowledge within the Doctoral School. The second stage is currently under development and its purpose is to ascertain whether this action provides more accessibility and more interaction with the tools used at the University and in the PhD students' social environment; it is based on Google tools. The roll out this improvement is planned for this year.
E.2.1.(1)	Public information about the programme	Difficulty in finding the information one is looking for on the website.	There is a lot of information to look through.	Students, teaching staff and candidates	Have a more user-friendly, intuitive website.	Give a visual presentation of the PhD process from the student's viewpoint.	2019/20 academic year	Implementation of the website's new design.	UOC Communications and Doctoral School	Pending. Work is still in progress on this.
E.2.1.(2)	Public information about the programme	No information about the theses' scientific outcomes.	No one has had the initiative to disseminate it.	General public	Disseminate the research carried out within the PhD programmes.	Create a specific section within the website devoted to the PhD students' research outcomes.	2019/20 academic year	Implementation of the specific section devoted to research within the website (based on the new activity report).	Programme coordinator and Technology	Done. The University has created a communication plan for research and intends to work on broadening the dissemination of the research outcomes of all its researchers and research groups; the PhD students will also be included in this plan.
E.2.1.(3)	Public information about the programme	No information about quality indicators	No one has had the initiative to disseminate it.	General public	Disseminate the indicators.	Set up an indicator publication protocol with Planning and Quality and Communications.	2018/19 academic year	Dissemination of indicators' outcomes.	Doctoral School and Planning and Quality	Done. As with the other official programmes, the quality indicators are published in the <i>Quality</i> section of the website. https://www.uoc.edu/portal/en/qualitat/index.html
E.3.2.	Monitoring of academic	The data on outcomes and	The PhD programme was	Doctoral	Automate the PhD programme data	Collect and distribute the course outcome and	2017/18	Data available in autumn 2018	Doctoral School	Pending. The data are not automated because the

Standard	Improvement area	Weak point detected	Identification of reason	Scope	Objective to be accomplished	Proposed action	Time limit	Monitoring indicator	Person in charge	Status - Remarks
	outcomes	satisfaction with the courses offered by the Doctoral School are not collected.	created at a research centre not subject to supervision by Planning and Quality.	School	collection procedures as much as possible.	satisfaction data.	academic year		Planning and Quality	tools currently used do not allow this. Waiting for the Gaudí to start.
E.4.1.	Suitability of teaching staff for the learning programme	Although the time devoted by the teaching staff to research is adequate, actions must be undertaken to increase it.	It is always beneficial to increase time devoted to research.	Teaching staff	Increase the number of teachers who supervise theses.	Promote co-supervision of PhD theses.	2017-2021	Number of co-supervisions. 75% of the theses should be co-supervised.	Programme coordinator	Pending. This action is viewed as a process that will be concluded in 2021. However, with the creation of new PhD programmes at the UOC, it has become necessary to reformulate this action. Teachers have been distributed among the programmes because the Doctoral School asks them to take part in one interdisciplinary programme and one specific programme. The results of this decision are already apparent from the number of supervisors currently involved in the programme. However, over the next two years, it is hoped that junior researchers will be recruited and, as stated in the improvement proposal, that the number of shared thesis supervisions between experienced supervisors and junior supervisors in training will increase.
E.4.2.	Suitability of teaching staff for the learning programme	The satisfaction survey has given low satisfaction results with the	The existing surveys do not allow any hypotheses to be	Programmes	Quickly detect the thesis supervisions that are not being carried out optimally.	Send a new survey each year to students about satisfaction with thesis supervision.	2018-2020	Satisfaction data with thesis supervision.	Doctoral School	Done. The proposed improvement action, namely to carry out an annual survey to track the

Standard	Improvement area	Weak point detected	Identification of reason	Scope	Objective to be accomplished	Proposed action	Time limit	Monitoring indicator	Person in charge	Status - Remarks
		thesis supervisors. We do not have enough information to know the causes.	made about the reasons for the low satisfaction with thesis supervision.							PhD students' satisfaction with the thesis supervisors, tells us that the level of satisfaction this is similar to the last but there is a slightly upward trend in terms of thesis supervisors' knowledge and level of involvement. The PhD students have been asked whether they have received the necessary support to carry out the research project. The percentage of students who say that they are satisfied or very satisfied has increased from 66.6% last year to 76% this year. And with respect to the questions that determine whether the thesis supervisor has sufficient knowledge of the supervised thesis' field of study and whether the supervisor has provided satisfactory answers to the doubts raised, the percentages are very similar, with 75% and 76%, respectively. https://infogram.com/1pkgmj1jeey5d3i9z91jzrmjgrt3x2d76x5?live
E.4.3.	Internationalisation	The number of foreign co-supervisors and foreign Thesis Supervision Committee	There is a low presence of international PhD holders.	Doctoral School	Increase the number of foreign co-supervisions.	Create a framework agreement for international co-tutorships.	2017/18 academic year	Number of co-tutorships created under the framework agreement.	Doctoral School Legal Office Thesis supervisors	Done. Although there already is a framework agreement for international co-tutorships, there has been no increase in the number of

Standard	Improvement area	Weak point detected	Identification of reason	Scope	Objective to be accomplished	Proposed action	Time limit	Monitoring indicator	Person in charge	Status - Remarks
		members is insufficient.								international researchers. The time given for carrying out the specific actions has not been sufficient to enable the inclusion of changes. The actions we are referring to are the creation of alliances with foreign universities where we have thesis supervisors from our university who work there on a stable basis or performing long-term research stays. After several attempts, the action to increase co-tutorships is not seen as feasible for significantly increasing international online collaboration between students.

PhD programme in the Information and Knowledge Society

Standard	Improvement area	Weak point detected	Identification of reason	Scope	Objective to be accomplished	Proposed action	Time limit	Monitoring indicator	Person in charge	Status - Remarks
E.2.1.(1)	Public information about the programme	Difficulty in finding the information one is looking for on the website.	There is a lot of information to look through.	Students, teaching staff and candidates	Have a more user-friendly, intuitive website.	Give a visual presentation of the PhD process from the student's viewpoint.	2019/20 academic year	Implementation of the website's new design.	UOC Communications and Doctoral School	Done. https://www.uoc.edu/portal/_resources/CA/documents/escola-doctorat/Infografia-HowToPhDattheUOC.jpg
E.2.1.(2)	Public information about the programme	No information about the theses' scientific outcomes.	No one has had the initiative to disseminate it.	General public	Disseminate the research carried out within the PhD programmes.	Create a specific section within the website devoted to the PhD students' research outcomes.	2019/20 academic year	Implementation of the specific section devoted to research within the website (based on the new	Programme coordinator and Technology	Pending. The University has drawn up a research dissemination plan, which it has presented during the first quarter of 2020.

Standard	Improvement area	Weak point detected	Identification of reason	Scope	Objective to be accomplished	Proposed action	Time limit	Monitoring indicator	Person in charge	Status - Remarks
								activity report).		
E.2.1.(3)	Public information about the programme	No information about quality indicators	No one has had the initiative to disseminate it.	General public	Disseminate the indicators.	Set up an indicator publication protocol with Planning and Quality and Communications.	2018/19 academic year	Dissemination of indicators' outcomes.	Doctoral School and Planning and Quality	Done. https://www.uoc.edu/portal/en/qualitat/resultats/resultats-rendiment/index.html
E.2.2.	Public information about the programme	No information about the thesis defence procedure, laboratories available, and career opportunities.	No one has had the initiative to disseminate it.	Students, teaching staff and candidates	Publish this information.	Publish this information on the website.	2018/19 academic year	Information published on the website.	Doctoral School manager	The information about thesis defence was already published on the Virtual Campus, in the section <i>Procedures / Submission and oral examination of the doctoral thesis</i> . Pending. The information about laboratories and career opportunities.
E.3.1.	Monitoring of academic outcomes	At present, the Doctoral School's office collects all these data manually.	The PhD programme was created at a research centre. Until now, the PhD programmes' operational data could not be integrated in the UOC's management systems, which is why their outcomes could not be included in the standard monitoring processes.	Doctoral School and Planning and Quality	Automate the PhD programme data collection procedures as much as possible.	Study the data types that can be collected systematically.	2018/19 academic year	Study developed and agreed between the Doctoral School and Planning and Quality.	Doctoral School and Planning and Quality	Pending. The data are not automated because the tools currently used do not allow this. Waiting for the Gaudí to start.
E.3.2.	Monitoring of academic outcomes	The data on outcomes and satisfaction with the courses offered by the Doctoral School are not collected.	The PhD programme was created at a research centre not subject to supervision by Planning and	Doctoral School and Planning and Quality	Automate the PhD programme data collection procedures as much as possible.	Collect and distribute the course outcome and satisfaction data.	2017/18 academic year	Data available in autumn 2018	Doctoral School and Planning and Quality	Pending. The data are not automated because the tools currently used do not allow this. Waiting for the Gaudí to start.

Standard	Improvement area	Weak point detected	Identification of reason	Scope	Objective to be accomplished	Proposed action	Time limit	Monitoring indicator	Person in charge	Status - Remarks
			Quality.							
E.3.2.	Student satisfaction	The satisfaction survey has given low satisfaction results with the thesis supervisors. We do not have enough information to know the causes.	The existing surveys do not allow any hypotheses to be made about the reasons for the low satisfaction with thesis supervision.	Programmes	Quickly detect the thesis supervisions that are not functioning optimally.	Send a new survey each year to students about satisfaction with thesis supervision.	2017/18 academic year	Data available in autumn 2018	Doctoral School	Done. https://infogram.com/1pkgmj1jeey5d3i9z91jzrnjgrt3x2d76x5?live
E.6.2.	Data collection	There is no established procedure for collecting the scientific outcomes achieved by part-time students.	For technological security reasons, part-time students do not have access to the GIR database.	Students	Store quality information about the students' scientific outcomes.	Include a resource/application in the annual report.	2018/19 academic year	Implementation of a new annual report system that includes insertion of outcomes in a database.	Doctoral School and Technology	Pending.
E.6.2.	Data collection	We do not track results in the thesis plan presentations.	It is not requested.	Students and programme coordinator	Obtain indicators of the quality of the initial training.	Collect data about the number of thesis plans approved at the first attempt, at the second attempt or failed.	2017/18 academic year	Thesis plan success data.	Programme coordinator	Done.

PhD programme in Network and Information Technologies

Standard	Improvement area	Weak point detected	Identification of reason	Scope	Objective to be accomplished	Proposed action	Time limit	Monitoring indicator	Person in charge	Status - Remarks
E.1.1.	Suitability of the students' profiles	There is a need for a sustained increase in the demand for admissions (although the current demand is	No cause is interpreted other than consolidation of the PhD programme.	Doctoral School	Achieve a sustained increase in the demand for admissions.	Create a communication and dissemination plan for the Doctoral School. Phase 1: analyse the focus group meetings and the channels. Phase 2: create a	Phase 1: November 2017 Phase 2: December 2018	Percentage increase in the demand. An annual increase of 10% is considered appropriate.	Doctoral School management team and PhD programme coordinator	Pending.

Standard	Improvement area	Weak point detected	Identification of reason	Scope	Objective to be accomplished	Proposed action	Time limit	Monitoring indicator	Person in charge	Status - Remarks
		satisfactory).				communication and dissemination plan that identifies the most appropriate focus groups and channels for reaching them.				
E.1.1. E.6.2.	Suitability of the students' profiles	The high percentage of part-time PhD students lowers the quality indicators.	There is a low percentage of full-time PhD students.	Doctoral School	Increase the number of full-time PhD students.	Increase the number of UOC-funded grants.	2017-2021	Number of active PhD students with UOC-funded grant An increase of between 1 and 2 PhD students a year with UOC grant is planned.	Doctoral School management Office of the Vice President for Strategic Planning and Research	Done. In spite of this, the number of grants has decreased in the 2020/21 academic year.
E.1.1. E.6.2.	Suitability of the students' profiles	The high percentage of part-time PhD students lowers the quality indicators.	There is a low percentage of full-time PhD students.	Doctoral School and Office of the Vice President for Strategic Planning and Research	Increase the number of full-time PhD students with FI grant.	Guide and mentor students applying for FI grants.	2017-2021	Number of FI grant applications made within the PhD programme. The objective is a minimum of 2 applications submitted per call.	UOC Knowledge Transfer and Research Support Office Doctoral School	Done.
E.1.1.	Suitability of the students' profiles	Technology transfer between PhD programme and enterprises can be improved.	The number of industrial doctorate students is low.	PhD programme in Network and Information Technologies	Increase the number of industrial doctorate students.	Advise in the presentation of industrial doctorate proposals: – Interviews with companies – Advisory service for researchers	2018-2020	Number of new industrial doctorate students per year. The goal is to consolidate 2 industrial doctorate students a year.	UOC Knowledge Transfer and Research Support Office Doctoral School	Done.
E.1.2.	PhD students' satisfaction	There are shortcomings in the collection of satisfaction data.	The data about the PhD students' satisfaction are insufficient.	Doctoral School	Have long-time series of satisfaction data to allow suitable analysis.	Collect data from the PhD students' satisfaction surveys.	2016-2018	Satisfaction data	Doctoral School Planning and Quality	Done.
E.2.1. E.3.1. E.4.2.	Public information about the PhD programme	Only the research profile of the researchers who have a published thesis offer is visible.	The public information is insufficient.	Doctoral School	Increase visibility of the programme's researchers and their research.	Publish the information about all of the PhD programme's teachers/researchers.	2018/19	Available researcher profiles.	PhD programme in Network and Information Technologies	Pending.

Standard	Improvement area	Weak point detected	Identification of reason	Scope	Objective to be accomplished	Proposed action	Time limit	Monitoring indicator	Person in charge	Status - Remarks
E.2.1.	Public information about the PhD programme	Although the website explains all the steps and procedures that must be carried out, a more intuitive presentation would provide additional support to the student.	The PhD students have difficulty in clearly understanding the procedures and deadlines.	Doctoral School	Make the presentation of the PhD programme, its procedures and deadlines easier to understand for PhD students.	Develop visually clear diagrams that enable the PhD student to know what processes and steps must be performed at any given time. Publish this information on the Doctoral School's website.	2019	Apply the presentation in the PhD programme's website.	Doctoral School management and administration	Pending.
E.2.1.	Public information about the PhD programme	Insufficient visibility is given to the programme's results.	The contributions published within the programme's framework are not visible on the website.	PhD programme in Network and Information Technologies	Increase visibility of the PhD programme's research/results.	Publish the best publication outcomes on the Doctoral School's website.	2019	New section within the PhD programme's website.	Management team of the PhD programme in Network and Information Technologies	Pending.
E.2.1. E.2.2.	Public information about the PhD programme	The public information concerning the indicators of certain dimensions is insufficient.	There are no public data concerning certain satisfaction and employability indicators.	PhD programme in Network and Information Technologies	Comply with the requirements for public access to information about the programme as regards quality of the training programme, quality of the outcomes and access to the labour market.	Publish the satisfaction and employability results on the Doctoral School's website. In addition, publish the monitoring reports and academic outcomes.	2019	Publication of the satisfaction and employability results on the PhD programme's website.	Planning and Quality, and management team of the PhD programme in Network and Information Technologies	Done. This documentation, and that of the other official programmes, is published in the <i>Quality</i> section of the website. https://www.uoc.edu/porta/es/qualitat/qualitat-titulacions/avaluacio-titulacions/escola-doctorat/index.html
E.2.1. E.3.1. E.3.2.	Satisfaction analysis	The low number of PhD students does not enable conclusions to be drawn in the analysis of the satisfaction surveys.	Qualitative analysis methods are required.	Doctoral School	In spite of the small number of students, have sufficient data to enable analysis of satisfaction.	Include qualitative methods to gather the PhD students' and thesis supervisors' opinions.	2018/19	Surveys with qualitative methods.	Doctoral School and Planning and Quality	We are not sure that we can reach the stage where this is performed systematically.
E.4.1. E.4.2.	Time allocation of teaching staff to research	Although the time devoted by the teaching staff to research is	It is always beneficial to increase time devoted to	Teaching staff	Increase the teaching staff's time allocation to research.	– Establish temporary reductions in teaching load. – Include research activity	2017-2020	Number of reductions of teaching load per year. At least 1	Faculty of Computer Science, Multimedia and Telecommunications	Pending.

Standard	Improvement area	Weak point detected	Identification of reason	Scope	Objective to be accomplished	Proposed action	Time limit	Monitoring indicator	Person in charge	Status - Remarks
		adequate, actions must be undertaken to increase it.	research.			assessment criteria.		reduction per year.		
E.4.3.	Time allocation of teaching staff to research	Although the time devoted by the teaching staff to research is adequate, actions must be undertaken to increase it.	It is always beneficial to increase time devoted to research.	Teaching staff	Increase the number of teachers who supervise theses.	Promote co-supervision of PhD theses.	2017-2020	Number of co-supervisions. 75% of the theses should be co-supervised.	Faculty of Computer Science, Multimedia and Telecommunications	Work is being done in this direction.
E.4.3. E.4.6.	Time allocation of teaching staff to research	Although the programme's teaching staff perform research stays, it is beneficial to maintain this activity.	It is always beneficial to maintain or increase the teaching staff's research stays.	Teaching staff	Maintain or increase research stays.	Support and foster research stays abroad.	2017-2020	Number of research stays by teaching staff. It would be considered satisfactory if 10% of the programme's teaching staff undertook research stays each year.	Faculty of Computer Science, Multimedia and Telecommunications	Done.
E.4.2. E.4.4. E.6.2.	Internationalisation	Insufficient number of foreign co-supervisors and foreign Thesis Supervision Committee members.	There is a low presence of international PhD holders.	Doctoral School	Increase the number of foreign co-supervisions.	Create a framework agreement for international co-tutorships.	2018-2020	Number of co-tutorships created under the framework agreement. It is necessary to reach 5 co-tutorships during the period 2018-2020.	Doctoral School Legal Office	Pending.
E.3.1. E.5.2.	Supervisor satisfaction	There are shortcomings in the collection of satisfaction data.	The data about the thesis supervisors' satisfaction are insufficient.	Doctoral School	Have long-time series of satisfaction data to allow suitable analysis.	Collect data from the thesis supervisors' satisfaction surveys.	2016-2018	Satisfaction data	Doctoral School Planning and Quality	Done. https://www.uoc.edu/porta/en/qualitat/resultats/resultats-satisfaccio/index.html

Improvement Plan. Follow-up of the 2017/2018 and 2018/2019 academic years

Level	Source	Standard	Weak point detected	Scope	Description of the cause	Proposed action	Prioritisation Impact	Proposed completion time	Monitoring indicator
AM_centre	External assessment	E4. Suitability of teaching staff for the learning programme		University	The digital identity is the researcher's personal brand.	Build the researcher's digital profile, consisting of creating and maintaining the profile in different spaces: ORCID, Publons, Scopus, Google Scholar and ResearchGate.	Adjust the proposal to the demand from society.	June 2020	Training in digital identity for predoctoral research staff.
AM_centre	External assessment	E2. Relevance of public information	At present, the PhD programme admission process is only published on the Doctoral School's website, prior to the registration option.	Faculties	The admission process is accessible on the website, but not within the information on each programme.	Create the option <i>Apply for admission to the programme</i> in each programme's website, and give this information in the Virtual Campus access profile developed specifically for PhD programme candidates and in the welcome classroom.	Respond to external requirements: legal or VSMA Framework processes.	June 2020	Inclusion of the PhD programme admission process in the information given on each programme's website.
AM_centre	External assessment	E2. Relevance of public information		Programme	The information about each programme's general and specific competencies should be more accessible.	Specify the general and specific competencies on each programme's website.	Adjust the proposal to the demand from society.	June 2020	Inclusion of the general and specific competencies within the information given about each programme.
AM_centre	Monitoring of current academic year	E4. Suitability of teaching staff for the learning programme	Competence acquisition monitoring not implemented.	Faculties	The activity still follows the traditional assessment guidelines.	Assessment of each programme's competencies.	Adjust the proposal to the demand from society.	June 2021	Assessment of each programme's competencies.
AM_centre	External assessment	E2. Relevance of public information	At present, this information is published in the study programme's <i>Admission</i> tab.	Faculties	Students should know which profiles will provide support within each programme's information.	Specify the people who can provide mentoring services (tutors) to students within the information given on each programme's website.	Standardise the processes and make them efficient.	June 2020	Inclusion of a precise definition of the functions of the various tutors and thesis supervisors on each programme's website.
AM_centre	External assessment	E2. Relevance of public information	At present, this information is published in the PhD student's profile.	Faculties	Students should be able to find out about the procedures related with thesis submission and mentions from outside of the	Specify the process for submitting and defending a PhD thesis, and also for obtaining the international mention.	Standardise the processes and make them efficient.	June 2021	Detailed, published definition of the process for submitting and defending a PhD thesis on the Doctoral

Level	Source	Standard	Weak point detected	Scope	Description of the cause	Proposed action	Prioritisation Impact	Proposed completion time	Monitoring indicator
					website, not just from inside the Virtual Campus.				School's website.
AM_centre	External assessment	E2. Relevance of public information	At present, the candidates are in contact with each other inside the welcome classroom.	University	There is little communication between candidates, interested persons, students and the scientific community and communication between them should be fostered.	Create a doctoral community to which both PhD degree holders and PhD students have access and in which they can communicate with each other.	Adjust the proposal to the demand from society.	June 2021	Creation of a horizontal communication space for the doctoral community.
AM_centre	Monitoring of current academic year	E1. Quality of the training programme	There are no satisfaction data concerning thesis defence.	Faculties	There are no satisfaction data concerning thesis defence.	Collect satisfaction data concerning thesis defence.	Standardise the processes and make them efficient.	June 2021	Organisation of a satisfaction survey that includes thesis defence.
AM_centre	External assessment	E5. Effectiveness of learning support systems	Currently, part of the information about the programmes only appears in the Doctoral School's general website, because it is considered that visibility is reduced if too much information is put on the programmes' individual websites.	Programme	Students should be able to see the learning resources and laboratories that are available on each programme's website, as well as the training activities and stays they will be required to perform.	Write and publish a text listing the learning resources, laboratories and training activities that will be provided in each programme.	Standardise the processes and make them efficient.	June 2021	Information published on each programme's website.
AM_centre	External assessment	E2. Relevance of public information	At present, information about the procedure for requesting temporary or permanent withdrawals from the programmes is only given in the Virtual Campus' <i>Procedures</i> section or in the Academic Regulations. This information should be more accessible.	Faculties	Information should be published on the Doctoral School's website explaining how and when students can request temporary or permanent withdrawal, and not just in the Virtual Campus and the Academic Regulations.	Write and publish a text explaining how and when students can request temporary or permanent withdrawal on the Doctoral School's website.	Standardise the processes and make them efficient.	June 2021	Information published on each programme's website.
AM_centre	External assessment	E2. Relevance of public information	The PhD programmes' career opportunities are not published.	Programme	A section on career opportunities should be included in each PhD	Write a text on each programme's career opportunities and publish the	Adjust the proposal to the demand from	June 2021	Information published on each programme's website.

Level	Source	Standard	Weak point detected	Scope	Description of the cause	Proposed action	Prioritisation Impact	Proposed completion time	Monitoring indicator
					programme's website.	information on each programme's website.	society.		
AM_centre	External assessment	E2. Relevance of public information	There is no option on the website that allows students, thesis supervisors and thesis assessment board members to download the documentation they need, so that this documentation is available to everyone.	Faculties	As there is no open space with this documentation, users who do not have the Virtual Campus profile cannot access it.	Create an institutional website or blog that provides the information organised in the following columns: <i>User, Procedure, Document and Deadline.</i>	Standardise the processes and make them efficient.	June 2022	Publication of the website or blog.
AM_centre	External assessment	E2. Relevance of public information	There should be more information about defended theses.	Faculties	More information should be provided when publishing information about defended theses.	Complete the information about defended theses.	Adjust the proposal to the demand from society.	June 2021	More information published about each thesis.
AM_centre	External assessment	E2. Relevance of public information	There should be more data about the results' quality in the portal's section.	University	There are data about PhD programmes that are not published on the website.	Publish all the data about PhD programmes in the UOC portal's section.	Respond to external requirements: legal or VSMA Framework processes.	June 2021	
AM_centre	External assessment	E2. Relevance of public information	Some parts of the programmes' information are not shown on responsive websites.	University	Some information is difficult to read on some mobile devices.	Apply responsive technology to the Doctoral School's website.	Adjust the proposal to the demand from society.	June 2022	
AM_centre	Monitoring of current academic year	E1. Quality of the training programme	The average for publications per thesis is 0.4% (data from the PhD programme in the Information and Knowledge Society).	Faculties	The average for publications per thesis is 0.4% (data from the PhD programme in the Information and Knowledge Society).	Collect the publications that have been made or planned in the activity report for assessment in the assessment report sent to students.	Improve the programme's results.	June 2021	
AM_centre	External assessment	E2. Relevance of public information	The external assessment reports are published in the UOC's <i>Quality</i> web page but	Faculties	If all the information that is available about the PhD programmes on the Virtual Campus and the portal were	It is not appropriate.			

Level	Source	Standard	Weak point detected	Scope	Description of the cause	Proposed action	Prioritisation Impact	Proposed completion time	Monitoring indicator
			not on the Doctoral School's website.		to be replicated in the Doctoral School's website, this website would be overloaded with information.				
AM_centre	External assessment	E1. Quality of the training programme	Online students do not have access to software or technological support.	Faculties	Online students do not have access to software or technological support.	Make the same resources available to online students that are available to on-site students.	Improve the programme's results.		
AM_centre	External assessment	E5. Effectiveness of learning support systems	Add a suggestions and complaints mailbox on the Doctoral School's website.	Faculties	Offer the possibility of sending complaints and suggestions to the Doctoral School from a mailbox.	It is not appropriate.			
AM_centre	External assessment	E1. Quality of the training programme	Organise a welcome event for students in which it would be possible to use videoconferencing channels.	Faculties	Students need to have contact with the University and generic information about the programmes.	Create a programme guide with generic information which will be available to students right from the start.	Improve the programme's results.		
AM_centre	External assessment	E6. Quality of the PhD programmes' results	There should be an increase in the number of applicants for PhD programmes from nearby universities.	Faculties	There should be an increase in the number of applicants for PhD programmes from nearby universities. The number of candidates could also be increased to have a greater pool from which to select students.	Create a communication and dissemination plan for the Doctoral School. Create a communication and dissemination plan that identifies the most appropriate channels for reaching them.	Adjust the proposal to the demand from society.		
AM_centre	External assessment	E2. Relevance of public information	Difficulty in finding the information one is looking for on the website.	Faculties	The information required by the thesis supervisors, the members of the thesis committees, the members the PhD programmes' academic committees and the cohort tutors should be accessible.	Create a section on the Doctoral School's website that includes the information required by the thesis supervisors, the members of the thesis committees, the members the PhD programmes' academic committees and the cohort tutors.	Standardise the processes and make them efficient.		
AM_centre	External assessment	E2. Relevance of public information	No information about the theses' scientific	Faculties	The outcomes obtained by the theses are not public.	Create a specific section within	Adjust the proposal to the		

Level	Source	Standard	Weak point detected	Scope	Description of the cause	Proposed action	Prioritisation Impact	Proposed completion time	Monitoring indicator
			outcomes.			the website devoted to the PhD students' research outcomes.	demand from society.		
AM_centre	Monitoring of current academic year	E2. Relevance of public information	Most of the information is given in three languages or only in English. In some new programmes, it is asked that the information also be available in Catalan and Spanish.	Programme	Some programmes should have the information in three languages. However, there are programmes in which it is sufficient to have the information only in English.	Depending on the programmes' parameters, check which ones should only be in English and which should be in all three languages.	Adjust the proposal to the demand from society.	October 2020	
AM_centre	External assessment	E2. Relevance of public information	There is no information on the website about the PhD programmes' admission profiles.	Faculties	Candidates should know the admission profile expected for each programme.	Give a description of the expected admission profile in each PhD programme's fact file.	Adjust the proposal to the demand from society.		
AM_centre	External assessment	E2. Relevance of public information	Students should know what the research plan consists of.	Faculties	PhD students or interested persons may be confused about the research plan and what it consists of.	Explain what the research plan consists of in the study programme's fact file.	Adjust the proposal to the demand from society.	October 2020	
AM_centre	Follow-up of previous years	E5. Effectiveness of learning support systems	The need for technological support in the Virtual Campus to cater for what should be a doctoral classroom, with the milestones and the assessment and monitoring criteria.	Faculties	The Virtual Campus' current classrooms do not meet the needs of PhD students or thesis supervisors.	Create classrooms that meet the PhD programmes' needs.	Standardise the processes and make them efficient.		
AM_centre	Monitoring of current academic year	E4. Suitability of teaching staff for the learning programme	There is a small group of teachers who supervise more than 4 theses.	Faculties	There are thesis supervisors who supervise more than 4 theses.	An analysis should be performed of the theses supervised by each supervisor and, if necessary, distribute the theses more evenly among the supervisors.	Improve the programme's results.	November 2020	
AM_centre	Monitoring of current academic	E4. Suitability of teaching staff for the learning	The satisfaction rate with thesis supervisors is below 80%.	Faculties	The satisfaction rate with thesis supervisors is below 80%.	Develop actions that would increase the PhD students' satisfaction rate with the thesis	Improve the programme's results.	June 2021	

Level	Source	Standard	Weak point detected	Scope	Description of the cause	Proposed action	Prioritisation Impact	Proposed completion time	Monitoring indicator
	year	programme				supervisors.			
AM_centre	Monitoring of current academic year	E6. Quality of the PhD programmes' results	The current management tools have become obsolete and, furthermore, are not adapted to the PhD programmes.	Faculties	The Gaudí should take into account the PhD programmes' needs and requirements.	The Gaudí should take into account the PhD programmes' needs and requirements.	Improve the programme's sustainability.		
AM_centre	Follow-up of previous years	E1. Quality of the training programme	There is a need for a sustained increase in the demand for admissions (although the current demand is satisfactory).	Faculties	No cause is interpreted other than consolidation of the PhD programme.	Create a communication and dissemination plan for the Doctoral School. Phase 1: analyse the focus group meetings and the channels. Phase 2: create a communication and dissemination plan that identifies the most appropriate focus groups and channels for reaching them.	Improve the programme's results.	Phase 1: November 2017 Phase 2: December 2018	Percentage increase in the demand. An annual increase of 10% is considered appropriate.
AM_centre	Follow-up of previous years	E1. Quality of the training programme	The high percentage of part-time PhD students lowers the quality indicators.	University	There is a low percentage of full-time PhD students.	Increase the number of UOC-funded grants.	Improve the programme's results.	2017-2021 (coinciding with the UOC's Strategic Plan)	Number of active PhD students with UOC-funded grant. An increase of between 1 and 2 PhD students a year with UOC grant is planned.
AM_centre	Follow-up of previous years	E1. Quality of the training programme	The high percentage of part-time PhD students lowers the quality indicators.	University	There is a low percentage of full-time PhD students.	Guide and mentor students applying for FI grants.	Improve the programme's results.	2017-2021 (coinciding with the UOC's Strategic Plan)	Number of FI grant applications made within the PhD programme. The goal is to submit at least 2 applications.
AM_centre	Follow-up of previous years	E1. Quality of the training programme	Technology transfer between PhD programme and enterprises can be improved.	Faculties	The number of industrial doctorate students is low.	Advise in the presentation of industrial doctorate proposals: – Interviews with companies – Advisory service for researchers	Improve the programme's results.	2018-2020	Number of new industrial doctorate students per year. The goal is to consolidate 2 industrial doctorate students a

Level	Source	Standard	Weak point detected	Scope	Description of the cause	Proposed action	Prioritisation Impact	Proposed completion time	Monitoring indicator
									year.
AM_centre	External assessment	E2. Relevance of public information	Only the research profile of the researchers who have a published thesis offer is visible.	Faculties	The public information is insufficient.	Publish the information about all of the PhD programme's teachers/researchers.	Respond to external requirements: legal or VSMA Framework processes.	2020/21 academic year	Researchers' profiles viewable from the PhD programme's website.
AM_programme	Follow-up of previous years	E2. Relevance of public information	Although the website explains all the steps and procedures that must be carried out, a more intuitive presentation would provide additional support to the student.	Programme	The PhD students have difficulty in clearly understanding the procedures and deadlines.	Develop visually clear diagrams that enable the PhD student to know what processes and steps must be performed at any given time. Publish this information on the Doctoral School's website.	Standardise the processes and make them efficient.	2020/21 academic year	Availability of the improvements in the PhD programme's presentation.
AM_centre	External assessment	E2. Relevance of public information	Insufficient visibility is given to the programme's results.	Faculties	The contributions published within the programme's framework are not visible on the website.	Publish the best publication outcomes on the Doctoral School's website.	Respond to external requirements: legal or VSMA Framework processes.	2020/21 academic year	Best contributions viewable from the PhD programme's website.
AM_centre	External assessment	E2. Relevance of public information	The public information concerning the indicators of certain dimensions is insufficient.	Faculties	There are no public data concerning certain satisfaction and employability indicators.	Publish the satisfaction and employability results on the Doctoral School's website. In addition, publish the academic outcomes.	Respond to external requirements: legal or VSMA Framework processes.	2020/21 academic year	Publication of the satisfaction and employability results on the PhD programme's website.
AM_centre	Follow-up of previous years	E4. Suitability of teaching staff for the learning programme	Although the time devoted by the teaching staff to research is adequate, actions must be undertaken to increase it.	University	The time devoted by teaching staff to research is one of the key points for the quality of the research performed, and also of the PhD programme.	<ul style="list-style-type: none"> - Establish temporary reductions in teaching load. - Include research activity assessment criteria. 	Improve the programme's results.	2017-2020	Number of reductions of teaching load per year. At least 1 reduction per year.
AM_centre	Follow-up of previous years	E4. Suitability of teaching staff for the learning	Although the time devoted by the teaching staff to	Faculties	The time devoted by teaching staff to research is one of the key points for the	Promote co-supervision of PhD theses.	Improve the programme's results.	2017-2020	Number of co-supervisions. 75% of the theses should be

Level	Source	Standard	Weak point detected	Scope	Description of the cause	Proposed action	Prioritisation Impact	Proposed completion time	Monitoring indicator
		programme	research is adequate, actions must be undertaken to increase it.		quality of the research performed, and also of the PhD programme.				co-supervised.
AM_centre	Follow-up of previous years	E4. Suitability of teaching staff for the learning programme	Although the programme's teaching staff perform research stays, it is beneficial to maintain this activity.	Faculties	The research stays are a resource for improving the PhD students' training.	Support and foster research stays abroad.	Improve the programme's results.	2017-2020	Number of research stays by teaching staff. It would be considered satisfactory if 10% of the programme's teaching staff undertook research stays each year.