



Agència
per a la Qualitat
del Sistema Universitari
de **Catalunya**

Final report assessing the design of the internal quality assurance system

Faculty of Mathematics and Statistics
Technical University of Catalonia

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I. DETAILS CONCERNING THE INTERNAL QUALITY ASSURANCE SYSTEM (IQAS) UNDER ASSESSMENT

University	Technical University of Catalonia
Centre	Faculty of Mathematics and Statistics
IQAS scope	Degrees taught at the Faculty of Mathematics and Statistics
Call	2007 – 2nd stage

II. ASSESSMENT OF THE DESIGN OF THE IQAS

Having examined the report drawn up by the Assessment Committee, the AQU Catalunya Specific Committee for the Quality Assessment of University Centres and Activities issued an overall **POSITIVE** assessment relating to the design of the IQAS for the Faculty of Mathematics and Statistics.

The final assessment given for each of the guidelines is as follows:

1.0 Quality goals and policy	Good
1.1 Quality assurance of training programmes	Satisfactory
1.2 Extent to which teaching is student-oriented	Satisfactory
1.3 Quality improvement and assurance of academic and teaching support staff	Satisfactory
1.4a Management and improvement of services and material resources	Satisfactory
1.4b Management and improvement of the quality of services and administration staff	Satisfactory
1.5 Analysis and use of results	Satisfactory
1.6 Publication of information on degrees	Satisfactory

The overall **POSITIVE** assessment given to the IQAS is based on the **good** or **satisfactory** assessment given to the guidelines set out in the AUDIT programme, and it is likewise founded on the identification of specific, cross-disciplinary positive aspects that lend the design of the IQAS its robust nature.

With respect to the design of the IQAS and the assessment prior to its implementation, **positive aspects** refer to elements described in sufficient detail making it possible to assume they will be successfully implemented with a certain degree of assurance. Even so, the Faculty of

Mathematics and Statistics should take these aspects into consideration within an ongoing improvement process.

The Assessment Committee highly values the approach developed for the university as a whole: an internal quality assurance system (or SAIQ: the abbreviation according to UPC's nomenclature) for the UPC, since it allows the university to uphold coherence and a common working framework within the internal quality assurance system. Similarly, the design and definition of processes in a structured, homogenous, standard format is also noteworthy and it lends the processes much clarity making them easier to execute in future.

As far as other **cross-disciplinary aspects** are concerned, a positive assessment is made of a uniform summary file on each guideline, as well as the scheme followed for classifying evidence which includes details of the file format type, the individual in charge of its possession and the time it will be preserved, the documents available and the extent to which processes and pending tasks have been developed. Likewise, noteworthy also is the structure of process maps (flowcharts) accurately compiling the various aspects relating to the procedures defined and the implementation of activities to be conducted. Lastly, it is necessary to point out that in each guideline and for all the processes described, quality control has been set up to consider the analysis of results, the publication of information on degrees for stakeholders and rendering of accounts, making it possible to complete the continuous improvement cycle.

Additionally, and **specifically for each guideline**, different aspects are identified which ensure successful implementation of the IQAS.

With regard to the **quality goals and policy** (guideline 1.0), the definition given for this guideline specifies the scope of action of the IQAS and sets out the centre's position with respect to quality. An integrated system is defined (bodies, procedures, processes) which can make it possible to develop the quality policy and goals. Moreover, a commitment is determined to assess yearly the extent to which the quality goals put forward have been reached based on an analysis of the results obtained, putting forward pertinent remedial measures and disclosing all the data available concerning degrees for the purposes of informing stakeholders and thereby allowing for the rendering of accounts. Similarly, the IQAS appoints individuals in charge, it outlines responsibilities and it considers the parties involved in the development, monitoring and assessment of the IQAS.

As far as the **quality assurance of training programmes** is concerned (guideline 1.1), the IQAS envisages mechanisms and procedures allowing for the implementation of improvements stemming from the process for reviewing degrees.

During the design stage, the development of guideline 1.2 – the extent to which **teaching is student-oriented** – was satisfactory. Indeed, particular note is made of the definition of processes relating to student support and guidance, as well as tutoring systems.

In the case of the **quality improvement and assurance of academic and teaching support staff** (guideline 1.3), this guideline is deemed as suitably developed in this design stage since a general, cross-disciplinary proposal has been taken on for the UPC as a whole. Furthermore, the process for assuring the quality of training of teaching and research staff is highly valued,

since it describes the regularity with which actions are carried out; the three spheres set out in the training plan - integration, initial and ongoing training; the mechanisms for reviewing, monitoring and assessing the plan; the involvement of teaching and research staff in analysis by means of satisfaction surveys, as well as the definition of indicators, are some of the remaining aspects worth highlighting. Lastly, the staff information systems and the existence of channels for staff participation are also positive elements.

As regards the **management and improvement of the quality of services and administration staff** (guideline 1.4b), although not called for in the AUDIT programme guidelines, aspects relating to the admission, training, assessment, promotion and acknowledgment of services and administration staff have been defined and developed in tandem with those relating to teaching and research staff since it is a cross-disciplinary aspect for the UPC as a whole.

In relation to the **analysis and use of results** (guideline 1.5), particularly prominent is the development of systems for compiling and analysing information to provide details on learning outcomes (employment integration, learning and satisfaction of stakeholders). A positive assessment is given to the centre's integration of the IQAS as a whole and through information stemming from the various processes comprising it, along with the analysis of learning outcomes, employment integration and satisfaction of stakeholders. Likewise, the overall resulting analysis is also worth highlighting as it also takes into consideration strategic planning and the goals set.

With regard to the **publication of information on degrees** (guideline 1.6), in this design stage the guideline is satisfactorily developed and much value is placed on the existence of mechanisms regulating and assuring the decision-making processes concerning the publication of up-to-date information on degrees.

III. SUGGESTIONS FOR IMPROVING THE DESIGN OF THE IQAS PRIOR TO IMPLEMENTATION

The assessment conducted on the design of the IQAS has led to the identification of a number of opportunities for improvement in certain areas. As a result, the Faculty of Mathematics and Statistics is advised to carry out an overhaul on these aspects in the short- or medium-term to ensure that the IQAS is smoothly implemented.

Firstly, various suggestions of a **cross-disciplinary** nature are put forward.

- Flowcharts. It is advisable to review certain flowcharts in order to ensure suitable correspondence with the text descriptions making it easier to interpret how said charts unfold. The review should consider the following areas:
 - The development of the text process must constitute a means for supporting and clarifying the implementation of the process in the form of a flowchart (which shall comprise the main benchmark for avoiding redundant information).
 - The flowcharts relating to sub-processes must be identified with various names (provided that the processes are formed by various sub-processes).
- Centre process map. It is advisable to include a map linking the various IQAS processes. This would provide a system overview and interdependence between processes that would be highly useful for achieving coordinated improvements to the IQAS.
- Documentation. It is advisable to review or include, if applicable, the documentation review check system (review background, clarity of current validated review, the person approving reviews, the place where documentation may be accessed and a check on authorisation for amending documentation, etc.).
- Body in charge. With a view to implementation of the IQAS, it is advisable to specify one sole body in charge of each process, clearly stating who is responsible for the full process, its efficiency and effectiveness, and continuous improvement.
- Distribution of competences and responsibilities. In order to ensure smooth implementation of the IQAS, it is suggested to distribute the ownership of each process over the various system processes so as not to be exclusively incumbent on the Permanent Committee or the management team. If not, there is a major likelihood that these bodies will become overwhelmed, thereby risking the effectiveness of the IQAS.
- Rendering of accounts. Lastly, it is advisable to place greater emphasis on the rendering of accounts. As well as a report on results, the centre should compare results with goals and lay out proposals for improvement accordingly.

Specifically for each guideline the following aspects are recommended for improvement in order to ensure smooth implementation of the IQAS.

The extent to which **teaching is student-oriented** (guideline 1.2) should include participation of departments as a stakeholder when it comes to designing and developing student support and guidance systems, the teaching methodology and the assessment of learning. Likewise, it is recommendable to give a separate definition of actions relating to the admission profile and, in

particular, the degree graduation profile (process, compilation and analysis of information, monitoring and gauging, responsibilities, etc.).

In the case of the **quality improvement and assurance of academic and teaching support staff** (guideline 1.3.), although the staff policy is regulated for the university as a whole, it is advisable for the centre to include in its IQAS those specific aspects which are incumbent on it, seeking to contribute to improving the quality of academic staff and teaching activities. Indeed, there is scope for strengthening mechanisms for monitoring, reviewing and improving the admission of academic and teaching support staff as well as the mechanisms relating to the monitoring, review and improvement of models for assessment, promotion and acknowledgment. A mix of responsibilities has been identified in the monitoring and improvement mechanisms. Lastly, it would be pertinent to define the responsibilities and the methods of action of the Teaching Staff Development Service which, according to the flowchart, monitors and assesses work positions.

Even on the basis of the positive assessment of the training process for academic staff, it is advisable for a proactive intervention to be given when it comes to defining the programme of training actions addressed to academic staff of the Faculty of Mathematics and Statistics by means of a customised proposal founded on a systematic identification of specific needs in line with the quality policy and goals defined.

As far as the **management and improvement of services and material resources** is concerned (guideline 1.4a), it is advisable for specification to be given of the goals and indicators in order to monitor and improve material resources.

As regards the **management and improvement of the quality of services and administration staff** (guideline 1.4b), although the services and administration staff policy is regulated for the university as a whole, it is advisable for the centre to include in its IQAS those specific aspects which are incumbent on it, seeking to improve the quality of staff in this category. It would be pertinent to incorporate participation of departments and their directors (service and unit directors, or the management) when it comes to defining, reviewing and improving the services and administration staff policy (for instance, when specifying how contract renewal is conducted).

With regard to the **analysis and use of results** (guideline 1.5), it is advisable to develop chapters 5.3 (quality control) and 6 (monitoring and gauging) in a uniform manner in order to lend greater coherence to the IQAS, since these are the sections that link each process with procedure 200.1.5.1 on analysing results. Likewise, based on the system for compiling and analysing information put forward in the IQAS, it would be pertinent to set up a scorecard making it possible to effect a comprehensive analysis of all results to establish the approach to actions for improvement and to make decision-making easier.

IV. ANNEX: MEMBERS OF THE ASSESSMENT COMMITTEE

Chair	Ms Flor Sánchez Fernández Vice-rector for Planning and Quality at the Autonomous University of Madrid
Academic member	Mr Alfonso Carlos Davalillo Head professor at the University of the Basque Country and member of the Chair on Quality
Academic member	Ms Carmen Martínez del Valle Director of the Accreditation and Assessment Division at the University of Alcalá
Professional member	Mr Roberto Corral González Quality director for Hewlett-Packard, SA
Clerk	Ms Caterina Cazalla Lorite AQU Catalunya project manager