



UNIVERSITAT POLITÈCNICA DE CATALUNYA
BARCELONATECH

Escola Superior d'Enginyeries Industrial,
Aeroespacial i Audiovisual de Terrassa

Quality Assurance System Manual

**Terrassa School of Industrial,
Aerospace and Audiovisual
Engineering (ESEIAAT).**

Terrassa, September 2024



INTERNAL QUALITY ASSURANCE SYSTEM

Terrassa School of Industrial, Aerospace and Audiovisual Engineering (ESEIAAT)

205. ESEIAAT INTERNAL QUALITY ASSURANCE SYSTEM MANUAL

Person responsible for the process	Approved by	Decision no.	Date of approval
Assistant director of Quality	School Board	J.ESEIAAT/2024/04/02	09/10/2024



Table of contents

INTRODUCTION.....	5
1. THE SCHOOL.....	5
1.1. A point of reference in industrial engineering.....	6
1.2. A point of reference in aerospace engineering.....	6
1.3. A point of reference in audiovisual systems engineering.....	7
1.4. University life.....	7
1.5. Business contact details.....	9
1.6. ESEIAAT buildings.....	9
1.7. Degrees.....	10
1.8. Departments.....	10
1.9. Information channels.....	11
2. GOVERNANCE.....	13
2.1. Organisation chart.....	13
2.2. Governing and representative bodies.....	14
2.2.1. Collegial bodies.....	14
2.2.2. Single-member bodies.....	14
2.2.3. Management team.....	14
2.2.4. Quality Management and Assurance Committee.....	14
2.2.5. Other committees.....	15
2.2.6. Representatives.....	15
2.3. Responsibilities for quality.....	15
2.3.1. Governing bodies with responsibility in the IQAS.....	15
2.3.2. Main functions of staff involved in the functioning of the IQAS.....	16
2.3.2.1. Management team.....	16
2.3.2.2. Quality specialist.....	17
2.3.2.3. Degree coordinators.....	17
2.3.2.4. Managers responsible for specialised processes and areas of the Management and Support Unit.....	17
2.3.2.5. Head of the Terrassa Campus Management and Support Unit.....	17
2.3.3. Planning, Assessment and Quality Bureau (GPAQ).....	17
2.4. Interest groups.....	18
2.4.1. Ways of participating in interest groups.....	19
2.4.2. Rendering of accounts to interest groups.....	19
3. ESEIAAT'S INTERNAL QUALITY ASSURANCE SYSTEM (IQAS).....	20
3.1. Scope of IQAS.....	20
3.2. Structure of IQAS.....	20
3.3. Set of processes.....	21
3.3.1. Generic Structure of a Process.....	21
3.3.2. Categories of Processes.....	22
3.3.3. Process map.....	23
3.4. Command chart.....	25
3.5. Documentation management.....	26



205. Internal quality assurance system manual

3.6. Review and improvement of the IQAS.....	27
3.7. Improvement Plan.....	27
3.8. Set of documents that comprise the IQAS.....	28
4. APPENDICES.....	30
Appendix 1. List of persons responsible for the policy and managers of processes.....	30
Appendix 2. Involvement of interest groups in each process.....	32
Appendix 3. Glossary.....	33
Appendix 4. Acronyms.....	34
Appendix 5. File to control revisions and amendments.....	35
List of photographs.....	37
List of figures.....	37
List of tables.....	37



INTRODUCTION

This document presents the internal quality assurance system (IQAS) for degrees at the Terrassa School of Industrial, Aerospace and Audiovisual Engineering. The manual is divided into four sections.

- First section: the Terrassa School of Industrial, Aerospace and Audiovisual Engineering (ESEIAAT) is presented briefly, including the degrees it teaches, the teaching departments and its information channels.
- Second section: the School's organisation chart is presented and the single-member and collegial governing bodies are described, as well as the responsibilities for quality and interest groups.
- Third section: the ESEIAAT's quality commitments are described with respect to its quality policy and its quality objectives are defined in relation to the School's strategic plan and its alignment with the UPC's strategic plan.
- Fourth section: the structure and scope of the processes that constitute the current IQAS are explained, that is, the process map relating to cross-cutting activities at the UPC. A brief description is given of how the documents generated by the IQAS are managed.

1. THE SCHOOL



Photograph 1. Facade of the TR-1 building

The **Terrassa School of Industrial, Aerospace and Audiovisual Engineering (ESEIAAT)** is a public higher education and research school of the Universitat Politècnica de Catalunya (UPC) on the Terrassa Campus. It was founded on 24 November 2015 when two schools with over one hundred years of history were joined: the Terrassa School of Industrial and Aeronautical Engineering (ETSEIAT) and the Terrassa School of Engineering (EET).

The joining of two historic schools with recognised experience and prestige has led to the **largest UPC school**, a modern school that is connected to the world and has a vocation for innovation and service and the will to maintain itself as a point of reference nationally and consolidate itself internationally in the field



of university education. Its main aim is to produce graduates who have the capacity for leadership and innovation in the multidisciplinary fields of engineering.

This is the start of a project for the future that is **committed to training engineers** who are equipped to face the challenges of a changing world undergoing continuous transformation and determined to act as an agent and driver of economic and social progress that contributes to society's development.

The School teaches a wide range of **degrees in industrial, aerospace and audiovisual engineering**. It offers many possibilities for academic careers to be adapted to the interests and needs of students from diverse backgrounds.

The ESEIAAT works with the support and complicity of the territory and its surroundings. The School is strongly rooted in the city of Terrassa and has longstanding ties to the business sector. Students have the option to learn by working through the university-business educational cooperation programme and activities that foster graduate employment.

The institution acts as a platform to support research and aims to serve the society of the future with knowledge creation, development and the application of technology to the needs of the public.

1.1. A point of reference in industrial engineering

The degree offerings are interdisciplinary and include the sequential programme of the bachelor's degree in Industrial Technology Engineering and the master's degree in Industrial Engineering, which confers the skills that qualify graduates to practise as industrial engineers. The School also offers bachelor's degrees that qualify graduates as technical engineers: Electrical Engineering, Industrial Electronics and Automatic Control Engineering, Mechanical Engineering, Chemical Engineering and Textile Technology and Design Engineering. It also teaches the bachelor's degree in Industrial Design and Product Development Engineering. The offerings in industrial engineering extend to face-to-face and blended learning master's degrees: Automatic Systems Engineering and Industrial Electronics; Industrial Scheduling; Textile Technology and Design; Paper and Graphics Technology; Research in Mechanical Engineering; and Industrial Design. Double degree programmes are also offered at the institution and with international institutions.

These degrees offer comprehensive training based on teaching quality and continuous learning that emphasises the acquisition of scientific and technical knowledge and professional competencies, as well as the personal development of the skills that society requires.

1.2. A point of reference in aerospace engineering

The activity of aerospace engineers covers the entire aerospace sector, both the production side (design, development and manufacture) of all kinds of aerospace vehicles, the various elements they are composed of and their operation and maintenance, and the logistics side associated with their use and operation, including airport easements and air navigation and traffic (aerospace control, management and exploitation, which include machinery and software for aerospace support systems and their interrelation). Their activity may also take place in the framework of aerospace infrastructure, the focus of which is the design, construction, use and maintenance of the infrastructure that supports aerospace activity. They are professionals who are trained to apply aerospace science and technology and develop new technologies, and they are fully qualified to certify aerospace vehicles and aerospace logistics systems, particularly airports and air navigation systems.



1.3. A point of reference in audiovisual systems engineering

ESEIAAT is a pioneer in this field, continuing the heritage of Telecommunications Engineering, specializing in Sound and Image. The degree in Audiovisual Systems Engineering combines the study of telecommunications applied to audio and video with advanced communication technologies like Internet transmission and streaming services. Students also work in audiovisual production and post-production and other communication systems, as well as acoustics and electronic devices, broadcasting, interactive multimedia and artificial intelligence technologies.

The program includes a strong practical component, enabling students to use state-of-the-art production equipment, editing software and audiovisual technologies. In addition, knowledge in telecommunications networks, signal processing and compression technologies are put into practice, with applications such as video, sound and television editing, and the installation of audiovisual systems for industrial and commercial environments.

With a high job placement rate, this position is designed to prepare versatile professionals capable of working in technological projects, audiovisual systems design and project management in a constantly evolving sector. The degree of these studies provides the professional attributions required by this specialty.

1.4. University life

The School enjoys an intense university life that fosters and facilitates participation, project-based learning, values education, entrepreneurship and the channelling of personal interests in the framework of teaching projects that combine training with immersion in the professional world.

The ESEIAAT provides the opportunity to enjoy a unique life experience. It promotes and facilitates [international mobility](#), [work placements](#), collaboration with leading [research groups](#), [double degrees](#), [exciting projects](#) with new classmates and participation in the Campus's student associations. Everything is focused on students completing their studies with the guarantee of a successful career and the most extensive social reach.

Learning support services are available that are centred on students' needs and help them to adapt to university life. Students are given professional, one-to-one, friendly attention throughout their time at the School. All this takes place on an urban campus with very good transport links and excellent scientific and technological infrastructure that is available for students, research groups and centres, researchers, professionals, companies and institutions.



Photograph 2. Lobby of the TR-1 building



1.5. Business contact details

University	Terrassa School of Industrial, Aerospace and Audiovisual Engineering (ESEIAAT)
Address	C/ Colom, 1-11. 08222 Terrassa (Barcelona)
Website	https://eseiaat.upc.edu/ca
CIF	Q-0818003-F
Tel. no.	93 739 8102

1.6. ESEIAAT buildings



Photograph 3. Map of the UPC Terrassa Campus

1. Management
2. Head of Terrassa Campus Management and Support Unit
3. Department and Institute Support Area
4. External Relations and Institutional Support Area
5. Bachelor's, Master's and Doctoral Degree Management Support Area
6. Research and TRR Management Support Area
7. Resources and Services Area
8. Works and Maintenance Service
9. ICT services
10. Laboratory Technicians Service Area
11. 24/7 space
12. Library



1.7. Degrees

Degrees in industrial engineering. Bachelor's degrees

Bachelor's degree in Industrial Design and Product Development	GREDIDP
Bachelor's degree in Electrical Engineering	GRELEC
Bachelor's degree in Industrial Electronics and Automatic Control Engineering	GREEIA
Bachelor's degree in Mechanical Engineering	GREMECA
Bachelor's degree in Chemical Engineering	GREQUIM
Bachelor's degree in Textile Technology and Design Engineering	GRETDT
Bachelor's degree in Industrial Technology Engineering	GRETI

Degrees in industrial engineering. Master's degrees

Master's degree in Industrial Engineering (120 ECTS credits)	MUEI
Master's degree in Textile Design and Technology (60 ECTS credits)	MUDTT
Master's degree in Paper and Graphics Technology (60 ECTS credits)	MUTPIG
Master's degree in Automatic Systems Engineering and Industrial Electronics (90 ECTS credits)	MUESAEI
Master's degree in Management Engineering (120 ECTS credits)*	MUEO
Master's degree in Technology and Engineering Management (90 ECTS credits)	MEM
Master's degree in Advanced Studies in Design-Barcelona (60 ECTS credits)	MBDesign
Master's degree in Research in Mechanical Engineering (90 ECTS credits)	MUREM

(*) *Blended learning*

Degrees in aerospace engineering. Bachelor's degrees

Bachelor's degree in Aerospace Technology Engineering	GRETA
Bachelor's degree in in Aerospace Vehicle Engineering	GREVA

Degrees in aerospace engineering. Master's degrees

Master's degree in Aerospace Engineering (120 ECTS credits)	MUEA
Master's degree in Space and Aeronautical Engineering (60 ECTS credits)	MASE

Degrees in telecommunications engineering. Bachelor's degrees

Bachelor's degree in Audiovisual Systems Engineering	GRESAUD
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1.8. Departments

ESEIAAT degrees are taught by professors from various UPC departments. These departments are:

- 702 - Department of Materials Science and Engineering (CEM)
- 707 - Department of Automatic Control (ESAI)
- 709 - Department of Electrical Engineering (DEE)
- 710 - Department of Electronic Engineering (EEL)
- 712 - Department of Mechanical Engineering (EM)



- 713 - Department of Chemical Engineering (EQ)
- 715 - Department of Statistics and Operations Research (EIO)
- 717 - Department of Engineering Graphics and Design (DEGD)
- 723 - Department of Computer Science (CS)
- 724 - Department of Heat Engines (MMT)
- 729 - Department of Fluid Mechanics (MF)
- 731 - Department of Optics and Optometry (OO)
- 732 - Department of Management (OE)
- 737 - Department of Strength of Materials and Structural Engineering (RMEE)
- 739 - Department of Signal Theory and Communications (TSC)
- 744 - Department of Network Engineering (ENTEL)
- 748 - Department of Physics (FIS)
- 749 - Department of Mathematics (MAT)
- 750 - Department of Mining, Industrial and ICT Engineering (EMIT)
- 751 - Department of Civil and Environmental Engineering (DECA)
- 756 - Department of Theory and History of Architecture and Communication Techniques (THATC)
- 758 - Department of Project and Construction Engineering (EPC)

1.9. Information channels

The information channels that the ESEIAAT uses to provide general information about the School and its degrees are listed below.

- E-mail address
 - School staff, including teaching, research and administrative staff, have access to e-mail (...@upc.edu). Student e-mail is managed by UPCnet (...@estudiantat.upc.edu).
- ESEIAAT website and intranet
 - The School's website, <https://eseiaat.upc.edu/>, is the showcase for the School and its degrees on the internet. It includes open-access information on IQAS processes.
 - The [ESEIAAT intranet](#) contains restricted information that is accessed with a username and password.
- [Atenea](#) virtual campus
 - Platform to support teaching for the restricted use of professors and students, accessed with a username and password.
- [e-Secretaria](#)
 - For procedures and processes relating to academic and teaching activity.
- Claims, complaints, suggestions and expressions of gratitude box, [OPINA](#)
 - Channel established so that groups of interest can address those responsible for the School's services, to express their opinion or degree of satisfaction with the services.
- Social networks
 - Facebook: <https://www.facebook.com/eseiaatUPC/>
 - X (Twitter): https://twitter.com/eseiaat_upc



205. Internal quality assurance system manual

Instagram: https://www.instagram.com/eseiaat_upc

LinkedIn: <https://es.linkedin.com/edu/eseiaat-upc-197020>

YouTube:

<https://www.youtube.com/c/ESEIAATUniversitatPolit%C3%A8cnicaCatalunya>

Telegram: https://t.me/eseiaat_upc

- Noticeboards, telephone, screen in the buildings' lobbies
- Reception
- Secretary's office



2. GOVERNANCE

2.1. Organisation chart

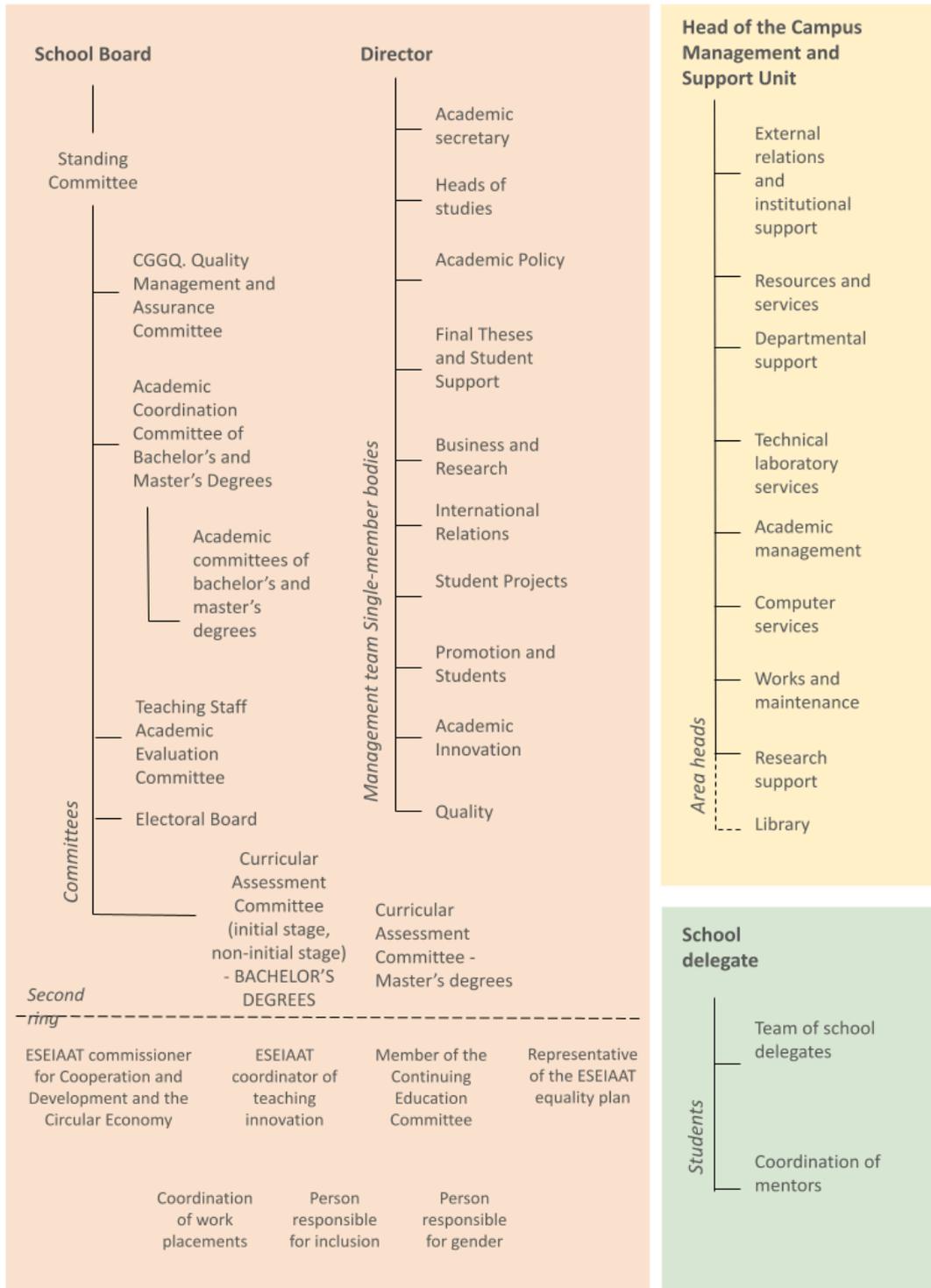


Figure 1. ESEIAAT organisation chart



2.2. Governing and representative bodies

The [ESEIAAT regulations](#), approved by the Governing Council on 19 July 2016, establish the collegial and single-member governing bodies and their duties and responsibilities.

2.2.1. Collegial bodies

- Board
- Standing Committee

2.2.2. Single-member bodies

- Director
- Assistant directors
- Academic secretary
- Student delegate
- Degree coordinators

2.2.3. Management team

The [management team](#) is constituted by:

- Director
- Academic secretary
- Assistant director of Academic Policy
- Assistant director of Quality
- Assistant director–director of studies of Bachelor's Degrees
- Assistant director–director of studies of Master's Degrees and Internationalisation
- Assistant director of Final Theses and Student Support
- Assistant director of International Relations
- Assistant director of Business and Research
- Assistant director of Student Projects
- Assistant director of Academic Innovation
- Assistant director of Promotion and Students
- Head of the Terrassa Campus Management and Support Unit

2.2.4. Quality Management and Assurance Committee

[Committee](#) responsible for monitoring the quality system and degree curricula, in accordance with the ex ante accreditation reports and Royal Decree 861/2010, of 2 July 2010. It was set up on 6 July 2016 ([Quality Management and Assurance Committee regulations](#)) as the advisory body that manages, coordinates, monitors and improves the internal quality assurance system (IQAS) (Decision CP 6/2016).

It is constituted by the following single-member bodies:

- The assistant director of Quality, who chairs the Committee.
- The assistant directors responsible for the academic area.
- The head of the Terrassa Campus Management and Support Unit.
- A coordinator of bachelor's degrees.



- A coordinator of master's degrees.
- Two members of the teaching and research staff affiliated with the School.
- A member of the administrative and service staff of the External Relations and Institutional Support Area, who acts as the secretary.
- The School's student delegate.

2.2.5. Other committees

- Academic committees of bachelor's and master's degrees
- Academic Coordination Committee of Bachelor's and Master's Degrees
- Teaching Staff Academic Evaluation Committee, CAAP
- Electoral Board

2.2.6. Representatives

The department [representatives](#) are members of teaching departments at the ESEIAAT.

2.3. Responsibilities for quality

The ESEIAAT has defined and documented the general functions and responsibilities of the management staff who manage, undertake and verify any work that has an impact on the internal quality assurance system (see [Appendix 1](#), "List of those responsible for the process and managers"). Even though it is not referred to specifically, they have organisational freedom and authority within their functions to:

- Identify and record any problem relating to the IQAS.
- Start actions to improve IQAS processes.
- Start actions to prevent non-compliance with IQAS processes.
- Start, recommend or adopt actions through preestablished channels.
- Verify that the solutions are implemented.
- Control processes that are not complied with until any deviations due to shortfalls or unsatisfactory situations are corrected.

2.3.1. Governing bodies with responsibility in the IQAS

The governing bodies with responsibility in the internal quality assurance system are:

- The [management team](#) (executes the design, development and review of the IQAS).
- The [Quality Management and Assurance Committee \(CGGQ\)](#) (monitors the IQAS and approves the review of this system that is presented to it by the management team, the annual report on the review and improvement of the IQAS, and the annual report on monitoring of the strategic plan, and submits them to the School Board for ratification).
- The School Board (approves the quality policy and the strategic plan and ratifies the annual report on the review and improvement of the IQAS, the management report, the monitoring report, and the annual report on monitoring the strategic plan that is presented by the CGGQ).



2.3.2. Main functions of staff involved in the functioning of the IQAS

2.3.2.1. Management team

ESEIAAT management is firmly committed to:

- Applying the School's quality policy and objectives.
- Ensuring that quality processes address and are focused on achieving the training requirements and objectives of the degrees the School offers.
- Continuously developing and improving the IQAS processes.
- Guaranteeing the quality of students' learning so that it meets the expectations of society in general and of interest groups in particular.

Functions of the director

- Manage and monitor the operation of the ESEIAAT, with the support of their team, governing bodies and other committees.
- Define the functions and responsibilities associated with this operation.
- Define the quality policy and objectives with the support of their team.
- Assign the required resources to the IQAS.
- Deal with claims made by groups of interest.

Functions of the assistant director who is responsible for the quality of the School

- Assume responsibility for the quality of the School.
- Act as a representative of the School on quality-related issues.
- Disseminate information on quality at the ESEIAAT.
- Keep the director informed about the development of the IQAS through established indicators.
- Ensure that everything set out in this manual is achieved.
- Coordinate the reviews of the IQAS.
- Write and review the quality manual and annual report on the review and improvement of the IQAS.
- Identify problems with the IQAS and initiate, recommend and contribute the required solutions.
- Record risks and opportunities relating to IQAS processes.
- Control the way that causes of non-compliance and/or incidents are handled and eliminated.
- Coordinate and draw up reports on the monitoring and accreditation of the School.
- Draw up a document on monitoring the strategic objectives.

Heads of processes

- Analyse and fill in the forms for reporting on the functioning and improvement of the process, considering the results of the dashboard indicators.
- Inform the assistant director of Quality of any incident or non-compliance relating to the process.



2.3.2.2. Quality specialist

- Implement and maintain the IQAS in accordance with the established requirements.
- Identify problems with the IQAS and initiate, recommend and contribute the required solutions.
- Control the handling and elimination of causes of incidents and non-compliance.
- Support processes of monitoring and certifying bachelor's and master's degrees at the School.
- Work with the various people who are responsible for the area of quality in the School, to disseminate the School's IQAS and ensure that the School has full knowledge of it.
- Manage the document system associated with the IQAS.
- Draw up and monitor the documents of the IQAS with the support of the persons responsible for the processes.
- Support the assistant director of Quality in drawing up documents on the IQAS.

2.3.2.3. Degree coordinators

- Verify all of the processes required to correctly develop quality in the degrees that they coordinate.
- Inform the assistant director of Quality about any incident or non-compliance relating to quality, and propose methods to resolve the problem.
- Collaborate in drawing up the School's monitoring and accreditation reports.

2.3.2.4. Managers responsible for specialised processes and areas of the Management and Support Unit

Manager responsible

- Communicate incidents and non-compliance to those responsible for the process.
- Support the person responsible for the process in drawing up the report.

Specialised areas of the Campus Management and Support Unit

- Verify all the processes required for correct development of quality in the management processes in which they specialise, and inform the manager about incidents or non-compliance.
- Help those responsible for the process and the manager to collect data and indicators on the process, for use in a report.

2.3.2.5. Head of the Terrassa Campus Management and Support Unit

- Manage, organise, monitor and control quality in service management.
- Assign functions and competencies to specialised areas of the Campus Management and Support Unit so that they can provide the services planned in IQAS processes.
- Coordinate, in the area of their responsibility, the School's IQAS processes along with other cross-cutting processes that are involved.

2.3.3. Planning, Assessment and Quality Bureau ([GPAQ](#))

This is the unit that supports the University's governing bodies in the design, implementation and monitoring of institutional planning and assessment processes, and in quality assurance, in accordance

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with the guidelines, institutional objectives and current legislation and regulations. It has the following functions, among others:

- Advise academic units and provide support in the areas of strategic planning and institutional assessment, and in the improvement and internal and external certification of the quality of their activity.
- Provide technical and methodological support, in accordance with assessment agencies' requirements, to UPC academic units in the following areas:
 - Implementation and management of internal quality assurance systems (IQAS).
 - Monitoring and accreditation of bachelor's, master's and doctoral degrees.
 - Implementation and consolidation of the process of institutional accreditation of schools.
- Monitor teaching and research staff's academic planning, analyse their activity, and assess the achievement of staff objectives.
- Draw up statistical reports and indicators of the activity and results based on data analysis, to ensure the integration, reliability and representativeness of information from the University's various areas of activity, and officially disseminate statistics generated internally and externally.
- Design, administer, analyse and draw up reports on the results of satisfaction surveys and opinion studies of agents of interest about the teaching activity and offering of courses and services associated with the University's activity.
- Support the University's governing bodies in cross-cutting processes (observatories of activities and rankings, management information systems/dashboards and business intelligence tools), to provide information, undertake a technical analysis of it and carry out studies on how to disseminate the information to interest groups.
- Manage and administer satisfaction surveys and opinion studies that are officially organised at the University and draw up and disseminate reports.

2.4. Interest groups

In relation to the quality of the teaching and learning process, the ESEIAAT has identified the main interest groups that participate directly or indirectly in teaching at the School (see [Appendix 2](#)).

An interest group is defined as any person or institution that has a direct relationship with teaching and learning at the School and the results that are obtained.

The following are considered interest groups:

- Students
- Teaching and research staff
- Administrative and service staff
- Employers
- Graduates
- Public administration
- Society in general



2.4.1. Ways of participating in interest groups

These interest groups participate actively in one way or another in the processes that comprise the IQAS. Specifically, **students, teaching and research staff and administrative and service staff** are represented in ESEIAAT collegial bodies or form part of the School Board, the Standing Committee and the various associated committees, such as the CGGQ.

Employers, graduates, government bodies and society in general are represented within the structure of the Universitat Politècnica de Catalunya through the Board of Trustees. The ESEIAAT can consult them through surveys or meetings when it has to make decisions on which their opinion is considered crucial.

Assessment and certification entities (ANECA, AQU) are of great importance, particularly regarding the ex ante accreditation and certification of degrees or in the IQAS.

The **UPC** is committed to supervising quality assurance from the moment that new training programmes are verified and to undertaking annual monitoring and accreditation. It supports the ESEIAAT through the Planning, Assessment and Quality Bureau (GPAQ).

2.4.2. Rendering of accounts to interest groups

The ESEIAAT management team systematically reports on the degree of achievement of the objectives and development of the IQAS to members of the School Board and the Standing Committee in ordinary sessions.

In addition, each of the procedures that forms part of the IQAS is related to public information on the results.

As part of the mechanism to provide public information and render accounts, the ESEIAAT annually draws up the [management report](#), which is published on the School's website and brings together the main results of the activities that have been carried out and the proposals for improvement that are considered.

The satisfaction of interest groups is gathered from an analysis of the annual results obtained in satisfaction surveys on the processes and the claims, complaints and suggestions received through the ESEIAAT [OPINA](#) channel.

OPINA!



**Felicitations, suggeriments,
queixes i reclamacions**



3. ESEIAAT'S INTERNAL QUALITY ASSURANCE SYSTEM (IQAS)

The IQAS framework of the Universitat Politècnica de Catalunya can be defined as an ordered, systematised set of processes and activities designed to ensure the quality of the teaching that is offered by obtaining evidence, analysing information, designing improvement actions, rendering accounts and transparency.

The ESEIAAT internal quality assurance system is drawn up considering the requirements of Royal Decree 1393/2007, the guidelines established in the AUDIT programme and the recommendations and good practices of the UPC Planning, Assessment and Quality Bureau (GPAQ).

The aim of the IQAS is to establish a set of processes that organise the way the School undertakes activities relating to the quality of educational programmes. In these processes, procedures for action are designed and bodies are identified that are responsible for the set of activities that lead to assessment, monitoring and dissemination of the development results.

3.1. Scope of IQAS

The IQAS of the ESEIAAT is applicable to all the official bachelor's degrees and master's degrees that are taught at the School.

3.2. Structure of IQAS

The IQAS can be broadly assimilated to the image on the following page. On the one hand, it relates to an external framework that includes UPC and other external regulations. There are also transversal processes that regulate how the UPC manages quality with its units, and an Institutional Strategic Plan that marks the main lines of action up to 2025.

Within the System, there are two main elements that drive the IQAS: the Quality Policy and Objectives and the Strategic Plan ESEIAAT 23-25. The Quality Policy includes principles that guide the ESEIAAT, but they do not concretize actions by themselves. This specification is found in the Strategic Plan and in the quality objectives.

The Strategic Plan, based on a SWOT analysis of the center and its relationships with the environment, defines three specific challenges. For each of them, three goals are established, which are specified in concrete objectives (actions). The goals are measured with indicators, which represent the Quality Objectives.

This is because the methodology used to design the IQAS of the UPC centers for Institutional Accreditation recommend that the quality objectives derive directly from a Strategic Plan.

However, the ordinary functioning of the ESEIAAT goes beyond the guidelines established in the Strategic Plan, as it needs to regulate all the areas of the center related to the teaching field. Thus, in the IQAS there are two different functions: on the one hand, it channels a Strategic Plan that, through goals and objectives, tries to achieve the evolution of specific indicators (Quality Objectives); and, on the other hand, it contributes to the continuous improvement of the functioning of the whole center through the set of processes and plans that describe it.

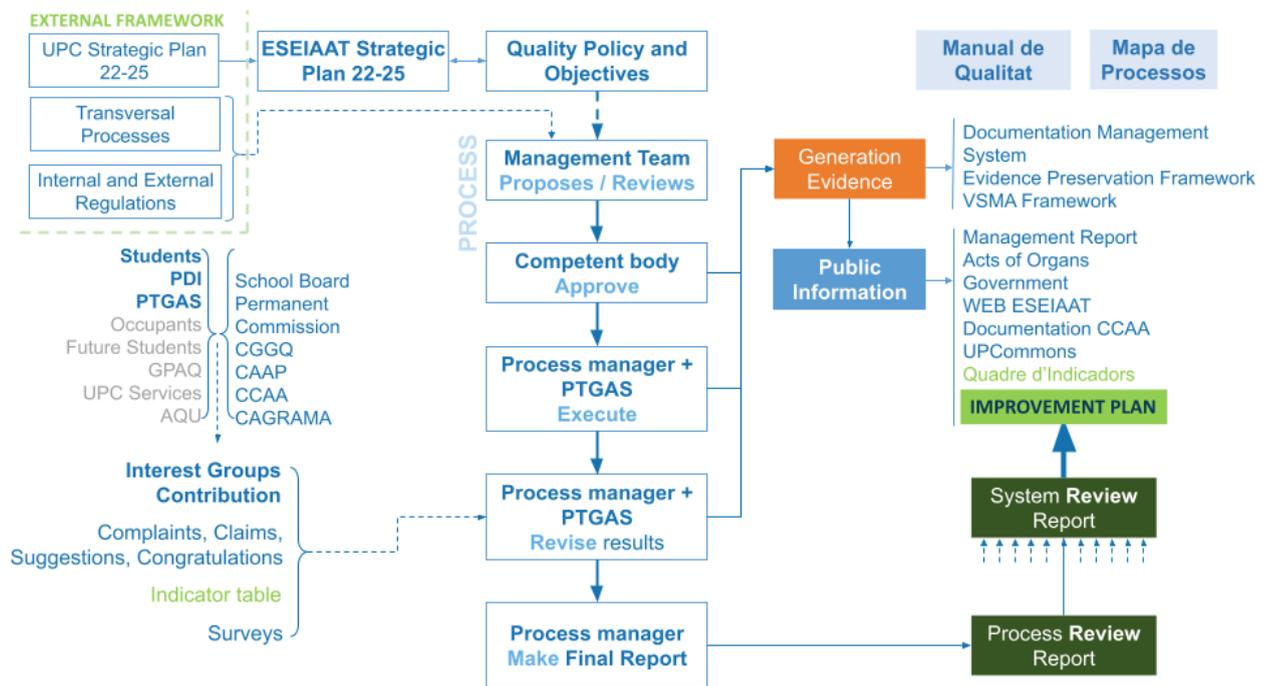


Figure 2. Structure of IQAS

3.3. Set of processes

3.3.1. Generic Structure of a Process

Although no two processes are the same, the following sequence is quite similar for all of them:

1. Under the regulation of external normatives, the Quality Policy and Objectives and the Strategic Plan, the management team proposes a set of actions aimed at carrying out what is proper to each process.
2. The competent body approves, if necessary, the proposal of the management team.
3. The process manager, together with the PTGAS of his area, executes the process.
4. From this process execution, evidence of the operation is generated, which is consequently stored and their results are subject to public information, either through the ESEIAAT's [website](#), publication in the DAU, etc.
5. The system channels the contributions of the various interest groups to each process through satisfaction surveys, the satisfaction surveys, [Opinion mailbox](#), Tickets and contributions from the Academic Committees. In this regard, the Procedure for the Management of Complaints, Recommendations, Suggestions and Congratulations ensures that the different contributions reach the corresponding person in charge.
6. The Command Chart collects all the indicators of the whole system.
7. The final results of the process are the subject of a final review by the process manager who give an answer, with a revision form on the correctness of the process design, the opportunity of modifications, the identification of indicators with unsatisfactory results, the need to request improvement actions through the Transversal Processes or the need to carry out improvement Proposals to help correct the problems detected.

3.3.2. Categories of Processes

The assistant director of Quality, with the support of the management team, drew up a proposal for process sheets, validated by the CGGQ on 21 January 2022. In this proposal, the processes are classified into categories: **strategic processes (PE)**, **key processes (PC)**, **support processes (PS)** and **improvement processes (PM)**. They are as follows:

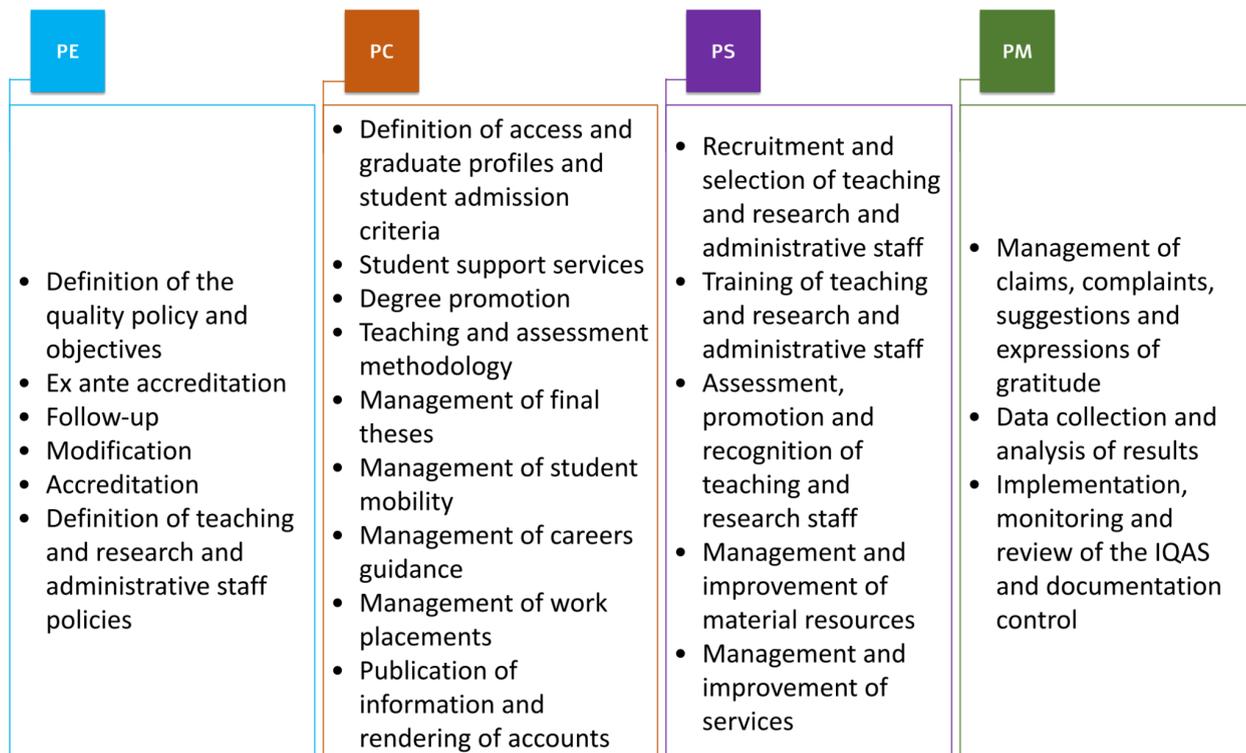


Figure 3. Categories of processes

The characteristics and functions of the four categories of processes are as follows:

- **Strategic processes**

Provide guidelines for the rest of the processes and guide the University towards the achievement of its mission.

- **Key processes**

They are directly linked to the educational activity and are therefore the processes that have the greatest impact on students. They are essential or characteristic processes aimed at meeting the users' demands.

- **Support processes**

They provide instrumental support for the development of fundamental processes and strategic processes.

- **Improvement processes**

 <p>UNIVERSITAT POLITÈCNICA DE CATALUNYA BARCELONATECH Escola Superior d'Enginyeries Industrial, Aeroespacial i Audiovisual de Terrassa</p>	<p>Internal quality assurance system (IQAS)</p> <hr/> <p>205. Internal quality assurance system manual</p>
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They bring together all the assessments and proposals for improvement made by those responsible for the processes and gather information from interest groups.

3.3.3. Process map

The IQAS processes of the ESEIAAT are interrelated with the [cross-cutting processes](#) of the UPC, so that there is a flow between each of the ESEIAAT processes and one or more UPC cross-cutting processes. The general relationships of inputs and outputs between ESEIAAT processes and UPC cross-cutting processes are shown in [Figure 4](#).

PROCESS MAP of the internal quality assurance system - ESEIAAT

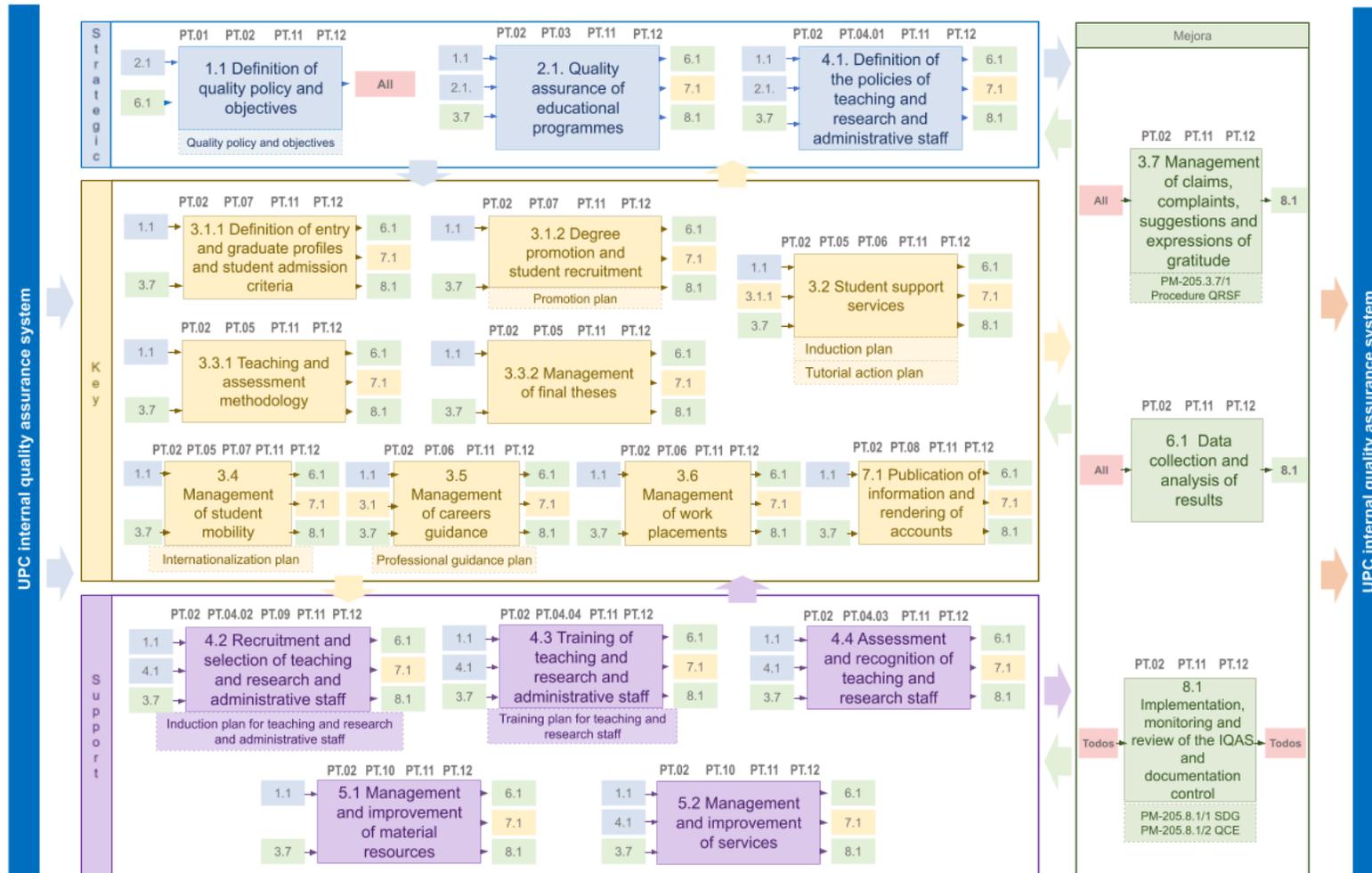


Figure 4. Process map



205. Internal quality assurance system manual

3.4. Command chart

The statistical collection reflecting the School's activity in the main areas is found in the [Command Chart](#) (QC). This chart is an instrument designed to facilitate the comprehension and analysis of the most significant indicators of the center.

The QC contains broad information on the indicators, descriptive sheets for each indicator, main characteristics (periodicity, extraction dates, source, etc.) and methodological notes.

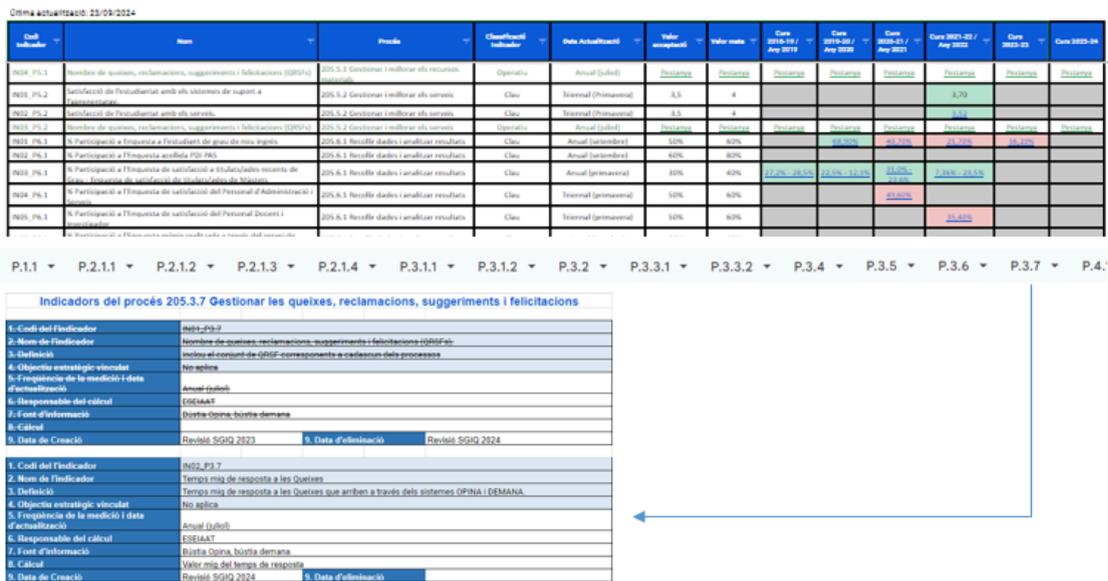


Figure 5. Command Chart with the detail of the indicator description tables

There are also tables included with disaggregated data, either by degree or by activity, depending on what the indicator demands.

205. Internal quality assurance system manual

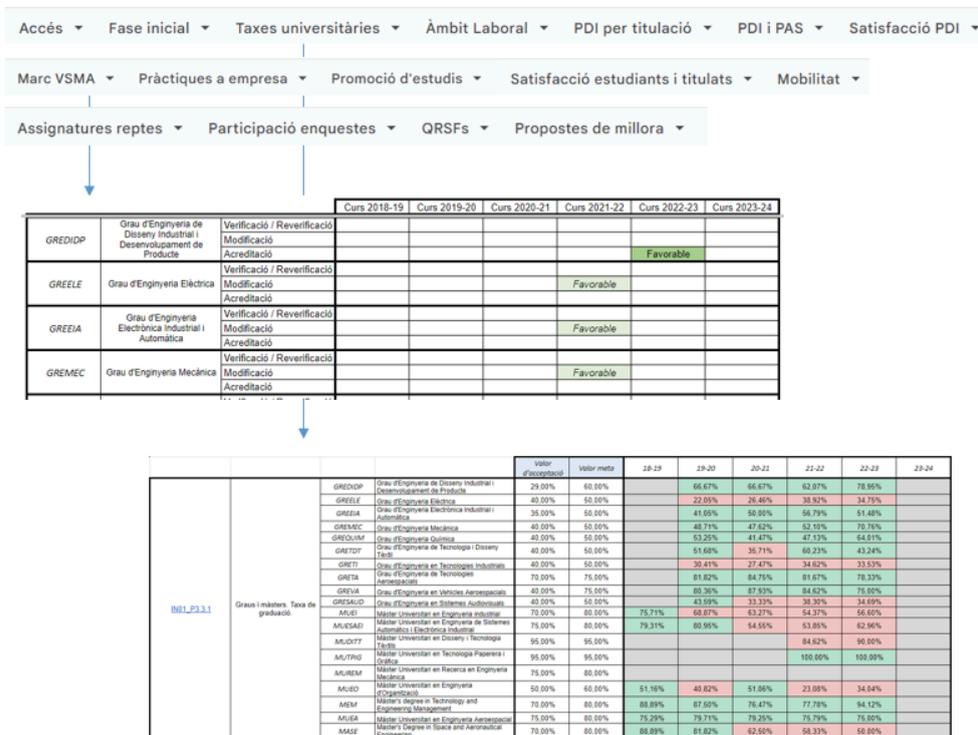


Figure 6. Command Chart. Detail of the interior pages with information display

With regard to the methodology for updating, creating and eliminating indicators, an indicator is considered modified if the change does not affect what it is measuring. In this case, the indicator remains in force. For example, if the name of the indicator is adjusted to the measured value or if the information source changes.

If the indicator is no longer used, it is considered deleted since that date. It is retained in the Command Chart to keep the previous values, but in the following columns it is marked as deleted. The indicator code will not be reused, and the date of deletion will be included in the descriptive table.

3.5. Documentation management

The ESEIAAT has procedures to control and update the documents generated by the quality system. Therefore, the following aims and criteria for action have been defined for managing documentation:

- Approve documentation before distributing it.
- Review, update and approve amendments of documents.
- Check and update documents at all times in the last level of review and ensure that they are available at the required points.
- Classify and code documentation.
- Guarantee the correct use of documents.
- Check, identify and distribute the documents that are required for planning and implementing the IQAS.
- Ensure that the documents are legible and easily identifiable.
- Manage documents that are invalid or obsolete and save only those that have a legal purpose.



- At the end of the retention period, the records must be destroyed by the person responsible for document safekeeping.
- Determine the persons responsible for the safekeeping and maintenance of the files and the control of quality records.

The main aim is to establish the procedure for recording, reviewing, amending, approving and distributing files relating to the IQAS of the ESEIAAT.

For this purpose, there is a table for the classification and preservation of all the documents generated and a list of documents that specifies the codes of the records, the description, the date of creation or modification and their nature as public or non-public, etc. In this way, the aim is to ensure the reliability of the information and the data. In addition, [UPCommons](#) is used as a repository for public digital IQAS documents.

Documentation implementation and management are defined in [PM205.8.1/1 Documentation management system](#).

3.6. Review and improvement of the IQAS

IQAS processes are reviewed by those responsible for them, with the support of the management team, at least once a year. The aim is to ensure that they meet the requirements of UPC, autonomous community and Spanish regulations, the quality policy and the established objectives.

As specified in the processes [205.6.1 Data collection and analysis of results](#) and [205.8.1. Implementation, monitoring and review of the IQAS of the ESEIAAT](#), the assistant director of Quality is responsible for gathering indicators of achievement of the objectives and for drawing up the annual report on the review and improvement of the IQAS, in which changes are recorded.

This report, along with the tracking of amendments made to processes and procedures, is submitted to the CGGQ to be revised and approved. The CGGQ submits the annual report on the review and improvement of the IQAS, and the processes and procedures reviewed, to the School Board for ratification.

3.7. Improvement Plan

The Improvement Plan is the final element of the IQAS, which defines the specific modifications motivated by the Review and Improvement of the IQAS and which is updated every time an Annual Review Report is made.

As part of this report, an account is given of the Improvement Proposals (IPs) that have been closed in the period under review, those that have been created, and those that remain open. Although in the review guide for each process GPAQ proposes a specific numbering for each process, once the PMs are entered into the SAT system, they take on an own numbering which is the one referred to here.

When a PM is related to a Transversal Process (TP), it is also entered in the SAT and, in parallel it is processed to the responsible of the corresponding TP. Once there, it can have three statuses:

- Not started. Normally because the resources (economic, personal, time) are not found to start, or because there is a lack of information to start working on the project.
- In progress. The responsible of the TP and the corresponding PTGAS develop what would have to cover the the demanded need.
- Finished. Either because what was expected is accomplished or because what was requested is not possible.



Once the PM addressed to the TP is closed in the TP, it is taken over by the center. If what has been done covers the totality of the the need, the local PM is also closed. If not, it is necessary to study up to what point it is possible to look for the solution directly in the center or, on the other hand, it is also necessary to close it.

3.8. Set of documents that comprise the IQAS

The IQAS is based on the contents established in the following documents, which develop its operating requirements.

Quality manual

The quality manual defines the scope of the IQAS, the organisation of the School, the responsibilities of the governing bodies in terms of quality and the general provisions and activities required to achieve effective quality management.

Processes

IQAS processes meet the requirements and guidelines described by the Catalan University Quality Assurance Agency (AQU Catalunya). There is a list of current processes on the [IQAS website](#) of the ESEIAAT.

UPC cross-cutting processes

The IQAS processes of the ESEIAAT are interrelated with the cross-cutting processes of the UPC, so that inputs in some processes are outputs of others. Figure 3 shows the relationships between the IQAS processes of the ESEIAAT and the [cross-cutting processes](#) of the UPC.

Procedures

The IQAS procedures of the ESEIAAT establish ways to reinforce and improve the execution of certain processes.

Command Chart

This is a table that gathers all the process indicators, which serve to analyse each process and make proposals for improvement, if necessary.

Improvement Plan

Where the specific modifications motivated by the IQAS Review and Improvement are defined and which is updated every time an Annual Review Report is made.

Other documented information

The manual, processes, procedures and other documents are generated by the IQAS, including the strategic plan, the operating plans (tutorial, reception of students, reception of teaching and research and administrative staff, promotion, professional guidance and training of teaching and research staff) and the various reports (management report, annual report to review and improve the IQAS, school monitoring and accreditation report, report on monitoring of the strategic plan, etc.), and the satisfaction surveys can be consulted in the [Quality](#) section of the ESEIAAT website.

The set of documents that comprise the IQAS of the ESEIAAT is the following:

Main documents

- 205 [Quality policy and objectives](#)
- 205 [Strategic plan](#)
- 205 [IQAS manual of the ESEIAAT](#)
- 205 [Process map](#)



205. Internal quality assurance system manual

	205	ESEIAAT dashboard
	205	Annual report to review and improve the IQAS
	PE_205.1.1	Definition of the quality policy and objectives
	PE_205.2.1.1	Ex ante accreditation
	PE_205.2.1.2	Follow-up
	PE_205.2.1.3	Modification
	PE_205.2.1.4	Accreditation
	PC_205.3.1.1	Definition of entry and graduate profiles and student admission criteria
	PC_205.3.1.2	Degree promotion and student recruitment
		205. Degree promotion plan
	PC_205.3.2	Student support services
		205. Tutorial action plan
		205. Induction plan of new students
	PC_205.3.3.1	Teaching and assessment methodology
	PC_205.3.3.2	Management of final theses
	PC_205.3.4	Management of student mobility
	PC_205.3.5	Management of careers guidance
		205. Professional guidance plan
Processes	PC_205.3.6	Management of work placements
		Management of claims, complaints, suggestions and expressions of gratitude
	PM_205.3.7	205 PM 205.3.7 1 Procedure for claims, complaints, suggestions and expressions of gratitude
	PE_205.4.1	Definition of teaching and research and administrative staff policies
		Recruitment and selection of teaching and research and administrative staff
	PS_205.4.2	205. Induction plan for teaching and research and administrative staff
	PS_205.4.3	Teaching and research staff training
		205. Teaching and research staff training plan
		Assessment, promotion and recognition of teaching and research staff
	PS_205.4.4	
	PS_205.5.1	Management and improvement of material resources
	PS_205.5.2	Management and improvement of services
	PM_205.6.1	Data collection and analysis of results
	PC_205.7.1	Publication of information and rendering of accounts
	PM_205.8.1	Implementation, monitoring and review of the IQAS and documentation control
		PM 205.8.1 1 Documentation management system
		PM_205.8.1_2 Table of preservation and list of evidence

Figure 7. IQAS documents of the ESEIAAT



4. APPENDICES

Appendix 1. List of persons responsible for the policy and managers of processes

The following table lists the persons responsible for the policies and the managers of the processes.

Table 1. Persons responsible for processes and process managers

CODE	Process	Person responsible for policy	Manager responsible
PE_205.1.1	Definition of quality policy and objectives	Director	Head of the Campus Management and Support Unit
PE_205.2.1.1	Ex ante accreditation	Assistant director of Academic Policy	Head of the Academic Management Area
PE_205.2.1.2	Follow-up	Assistant director of Quality	Quality specialist
PE_205.2.1.3	Modification	Assistant director of Academic Policy	Head of the Academic Management Area
PE_205.2.1.4	Accreditation	Assistant director of Quality	Quality specialist
PC_205.3.1.1	Definition of entry and graduate profiles and student admission criteria	Assistant director of Academic Policy	Head of the Academic Management Area
PC_205.3.1.2	Degree promotion and student recruitment	Assistant director of Promotion and Students	Head of the External Relations and Institutional Support Area
PC_205.3.2	Student support services	Assistant director–director of studies of Bachelor's Degrees	Head of the Academic Management Area
PC_205.3.3.1	Teaching and assessment methodology	Assistant director of Academic Policy	Head of the Academic Management Area
PC_205.3.3.2	Management of final theses	Assistant director of Final Theses and Student Support	Head of the Academic Management Area
PC_205.3.4	Management of student mobility	Assistant director of International Relations	Head of the Academic Management Area
PC_205.3.5	Management of careers guidance	Assistant director of Student Projects	Head of the Academic Management Area
PC_205.3.6	Management of work placements	Assistant director of Business and Research	Head of the Academic Management Area
PM_205.3.7	Management of claims, complaints, suggestions and expressions of gratitude	Assistant director of Quality	Quality specialist
PE_205.4.1	Definition of teaching and research and administrative staff policies	Director	Head of the Campus Management and Support Unit
PS_205.4.2	Recruitment and selection of teaching and research and administrative staff	Director Head of the Campus Management and Support Unit (administrative staff)	Head of the Campus Management and Support Unit



205. Internal quality assurance system manual

PS_205.4.3	Training of teaching and research and administrative staff	Assistant director of Academic Innovation (teaching and research staff) Head of the Campus Management and Support Unit (administrative staff)	Head of the Campus Management and Support Unit
PS_205.4.4	Assessment, promotion and recognition of teaching and research staff	Academic secretary	Head of the Campus Management and Support Unit
PS_205.5.1	Management and improvement of material resources	Head of the Campus Management and Support Unit	Head of the Management of Resources and Services Unit
PS_205.5.2	Management and improvement of services	Head of the Campus Management and Support Unit	Head of the Works and Maintenance Service
PM_205.6.1	Data collection and analysis of results	Assistant director of Quality	Quality specialist
PC_205.7.1	Publication of information and rendering of accounts	Academic secretary	Quality specialist
PM_205.8.1	Implementation, monitoring and review of the IQAS and documentation control	Assistant director of Quality	Quality specialist



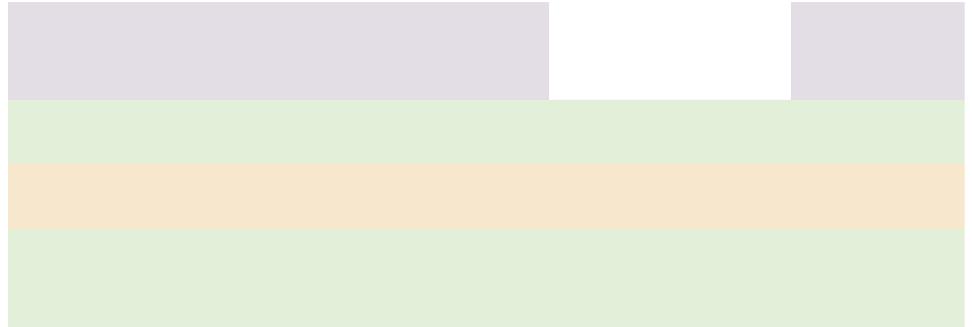
Appendix 2. Involvement of interest groups in each process

Table 2. Interest groups

ESEIAAT processes	Teaching and research staff	Adm. and service staff	Students	Graduates	Employers	Govt bodies and society in general
PE_205.1.1. Definition of quality policies and objectives in training						
PE_205.2.1.1. Ex ante accreditation						
PE_205.2.1.2. Follow-up						
PE_205.2.1.3. Modification						
PE_205.2.1.4. Accreditation						
PC_205.3.1.1. Definition of entry and graduate profiles and student admission criteria						
PC_205.3.1.2. Degree promotion and student recruitment						
PC_205.3.2. Student support services						
PC_205.3.3.1. Teaching and assessment methodology						
PC_205.3.3.2. Management of final theses						
PC_205.3.4. Management of student mobility						
PC_205.3.5. Management of careers guidance						
PC_205.3.6. Management of work placements						
PM_205.3.7. Management of claims, complaints, suggestions and expressions of gratitude						
PE_205.4.1. Definition of policies of teaching and research staff						
PS_205.4.2. Recruitment and selection of teaching and research and administrative staff						
PS_205.4.3. Training of teaching and research and administrative staff						
PS_205.4.4. Assessment, promotion and recognition of teaching and research staff						
PS_205.5.1. Management and improvement of material resources						



PS_205.5.2. Management and improvement of service resources
PM_205.6.1. Data collection and analysis of results
PC_205.7.1 Public information and rendering of accounts
PM_205.8.1. Implementation, monitoring and review of the IQAS and documentation control



Appendix 3. Glossary

Urban university campus: physical place located in the city where university activity is carried out, but also a space to meet others that generates knowledge and specificity.

PDCA (plan-do-check-act) cycle: this is a cyclical sequence of actions that are undertaken throughout the life cycle of a service or product to plan for quality. Continuous improvement.

Student: person enrolled on the reference date in the assessment of at least one subject in any programme leading to an official qualification.

Values education: activity through which students are given tools that enable them to contribute to the well-being of those around them, whether they are close to them or more distant.

Interest group: any person or institution related directly to the development of teaching-learning and the results obtained at the School.

Improvement plan: set of proposed actions for improvement to resolve critical aspects or weaknesses in a specific activity. Each improvement action is associated with planning, a person responsible, some required resources and some monitoring indicators.

Process: sequence of activities that are ordered following criteria of efficiency and efficacy, transform the initial elements into products or services for the client (internal or external) and add value to them.

Teaching quality: implementation, monitoring and assessment of degrees and internal quality assurance systems.

Document management system: process of organisation aimed at ensuring the creation, maintenance and preservation of documents required to develop the respective activities.



Appendix 4. Acronyms

ANECA	National Agency for Quality Assessment and Accreditation
AQU	Catalan University Quality Assurance Agency
CAAP	Committee for the Academic Evaluation of the Faculty.
CAGRAMA	Academic Committee for Bachelor's and Master's Degrees.
CAAC	Academic Committee for the Coordination of Undergraduate and Master's Degrees.
CGGQ	Quality Management and Assurance Committee
ENQA	European Association for Quality Assurance in Higher Education
DAU	Single Annual Document: Annual Report, Management Report and Center Follow-up Report.
EET	Terrassa School of Engineering
ESEIAAT	Terrassa School of Industrial, Aerospace and Audiovisual Engineering
ETSEIAT	Terrassa School of Industrial and Aeronautical Engineering
GPAQ	Planning, Assessment and Quality Bureau (GPAQ)
PTGAS	Staff who are part of the administrative, management and service structure of the School
PDI	Staff who have the qualifications and certifications necessary for university teaching and research
IQAS	Internal quality assurance system
TFE	Final thesis



Appendix 5. File to control revisions and amendments

File to control revisions and amendments				
Version	Description	Body responsible	Decision no.	Date of approval
V3	<p>Incorporations:</p> <ul style="list-style-type: none"> Expansion of the information on the field of audiovisual engineering. Sub-sections 4.2 Structure of the IQAS, 4.3.1 Generic Structure of a Process, 4.5. Command Chart, 4.8. Improvement plan. <p>Modifications:</p> <ul style="list-style-type: none"> Restructuring of chapter 3. Updating of RD 1393/2007 by RD 822/2021 of September 28th. <p>Eliminations:</p> <ul style="list-style-type: none"> subsection: Specifying of the quality objectives, strategic challenges, alignment with the UPC Strategic Plan. 	School Board	J.ESEIAAT/2024/04/02	09/10/2024
V2	<ul style="list-style-type: none"> Chapter 1. Sections: university life, departments, information channels Chapter 2. Now called "Governance". The section "Governing bodies" has been restructured and the agents of the School who are responsible for quality are specified. Chapter 3. Now called "ESEIAAT quality policy and objectives". It contains the quality policy, the ESEIAAT strategic plan and a table showing the relationship between strategic challenges, strategic objectives and the UPC strategic plan. The section "How the ESEIAAT 	School Board	J.ESEIAAT/2023/02/01	25/10/2023



205. Internal quality assurance system manual

	<p>defines its quality policy” has been deleted.</p> <ul style="list-style-type: none">● Chapter 4. The process map that includes cross-cutting UPC processes has been updated. IQAS● The appendices “List of those responsible for policy and process managers”, “Interest groups” and “Involvement of interest groups in each process” have been updated.			
V1	Initial version	School Board	J.ESEIAAT/2022/01/03	09/03/2022



List of photographs

Photograph 1. Facade of the TR-1 building	5
Photograph 2. Lobby of the TR-1 building	8
Photograph 3. Map of the UPC Terrassa Campus	9

List of figures

Figure 1. ESEIAAT organisation chart	13
Figure 2. Structure of IQAS	21
Figure 3. Categories of processes	22
Figure 4. Process map	24
Figure 5. Command Chart with the detail of the indicator description tables	25
Figure 6. Command Chart. Detail of the interior pages with information display	26
Figure 7. IQAS documents of the ESEIAAT	29

List of tables

Table 1. Persons responsible for processes and process managers	30
Table 2. Interest groups	32