Technical University of Catalonia

Institutional Self-Evaluation Report in Accordance with the Protocol of the European University Association

Barcelona, February 2005
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Introduction

A brief analysis of the self-evaluation

The initiative of evaluating the Technical University of Catalonia (UPC), in accordance with the methodology proposed by the European University Association following its Institutional Assessment Programme, arose from a meeting between the Minister of Universities, Research and the Information Society of the Catalan Government and the rectors of the Catalan public universities.

After the proposal had been put forward, it was debated by the Board of Management and the various governing bodies were informed. UPC then agreed to participate actively because it considered that the project was a good opportunity to analyse the various policies and processes that the University has followed in the last few years. It was also seen to be a complementary tool for institutional management integrated in the decision-making processes of the University. Finally, it could help the University to examine the definition of long- and medium-term objectives, to assess its strategy of management, teaching, research and funding, and to review monitoring and quality assurance processes. These factors are especially important now that the university system is facing a short-term challenge, the European Higher Education Area, which should lead us to reflect on the effectiveness of some of our activities and to reconsider the structure of the course offerings and the educational model.

In order to carry out this project, the University has appointed an internal committee to help to draw up the Self-Evaluation Report through the analysis of documents and by contributing its own reflections. This committee is composed of:

- Chairman of the Committee: Ramon Carreras (Vice-Rector of Strategic Planning, Libraries and Language Policy)
- Lecturer-Speaker: José Luis Andrés Yebra (EPSC)
- Representatives of the teaching and research staff: Joan Lluís Zamora (ETSAV), Joan Ramon Casas (ETSECCPB)
- Representative of the administrative and service staff: Anna Xalabarder (EPSEVG)
- Representative of the students: Joan Pedrós (EPSEB)
- Rapporteurs/support staff: Xavier Massó/Santi Roca (APAE)

The internal committee designed a work plan that involved several work meetings and internal monitoring meetings, as well as the holding of interviews with vice-rectors who validated and completed the report from their perspective (teaching, research and personnel).
Institutional context

Brief presentation of the institution

The Technical University of Catalonia (UPC) is a public institution that carries out training and research in the fields of technology, science, art and the humanities.

UPC’s management model is based on the transparency of objectives and results of the various departments of which it is composed, which should lead to an improvement in teaching, research and management and greater transparency and accountability to society.

UPC's course offerings are adapted to the demands of society. UPC currently offers over 40 official short cycle and long cycle qualifications within the following areas:

- Architecture
- Industrial Engineering
- Mathematical Sciences
- Nautical Studies
- Civil Engineering
- Health Sciences
- Economics
- Information Technology, Telecommunications and Multimedia
- Agriculture and Forestry
- Aeronautics

In addition to courses that are official throughout Spain, UPC offers seven non-regulated qualifications and a wide range of postgraduate and lifelong training courses.

The geographical distribution of the course offerings is shown in the following image:

![Geographical distribution of course offerings](image)

UPC's research is at the forefront in many different fields and is closely linked to the interests of society, particularly those of the industrial sector. The main groups in charge of research are the 150 research groups, the 40 departments and the 3 university institutes.

The research is carried out within the following areas: Architecture and Urban Design, Information and Communication Technologies, Environmental Engineering and Sustainability, Civil Engineering, Chemical Engineering, Heat Engineering, Materials Engineering, Industrial Systems Engineering and Applied Sciences.
UPC today. Main figures

The main figures on the activity of the University can be found on the UPC website. Here we present only the most important of these in each field of activity (figures for the 2003-2004 academic year).

- Schools 15
- Departments 40
- University research institutes 3

- Partner schools 3
- Associate schools 4
- Libraries 13

First and second cycle courses

Number of qualifications offered
- Official first and second cycle qualifications 8
- Official first cycle qualifications
  - Schools 23
  - Associate schools 11
- Official second cycle qualifications 8
- Non-regulated qualifications 7

Number of places for new students
- Total schools 5,340
- Total associate schools 1,615

Demand as the first choice
- Total schools 6,239
- Total associate schools 1,390

Graduates (2002-2003 academic year)
- Total schools 3,512
- Total associate schools 1,036

Third cycle courses

- Doctoral programmes 47
- New students 826
- Students with minimum research capacity 286
- Doctoral theses defended 178

(2002-2003 academic year)

Lifelong training courses (Managed by the Technical Foundation of Catalonia)
- Master's programmes offered 106
- Postgraduate programmes offered 116
- Postgraduate courses offered 134
- Graduates 5,744

Research and transfer of research results (2002-2003 academic year)

- Articles published in scientific journals 1,073
- Books published 80
- Book chapters 110
- Publications at conferences
  - Full text 1,564
  - Abstracts 458
- Active patents 50
- Scientific and technical awards received 65
- Number of European projects 37
- Number of publicly funded projects 71
- Number of agreements with private companies 476
- Income managed by the CTT €41,537,661.26

The people

- Tenured and untenured teaching staff 2,531
- Research staff 73
- Research staff in training 348
- Administrative and service staff 1,280
- First and second cycle students
  - Total schools 28,362
  - Total associate schools 5,099
- Postgraduate students 2,929
- Lifelong training students 5,133

Budgetary information

- Income 2003 (x 1000 euros) 219,991,712
- Initial budget 2005 (x 1000 euros) 267,187,281
- Initial investment budget 2005 (x 1000 euros) 75,373,304
- Floor space of buildings 2003 (in square metres) 372,472
Institutional norms and values

A. What is the institution trying to do?

A.1 Mission:

The University, as an institution that gathers, creates and disseminates knowledge, and that in the past has demonstrated its capacity to create, criticise and put forward ideas, has a clear responsibility to help pave the way towards a more knowledgeable, supportive and sustainable world. To be more specific, UPC must undertake to learn about and teach students to understand the world today. It must likewise structure, break down and absorb the flow of information available, whose sheer dimensions can be disconcerting and lead to passivity.

Besides its involvement in the above-mentioned social transformations, UPC is also undergoing internal changes. The Organic Law on Universities (LOU) and the Catalan Universities Law (LUC), which have resulted in a thorough revision of our statutes, and, more importantly, the definition and subsequent incorporation in a European Higher Education Area, mark the beginning of a period of radical changes that will not only affect the way studies are structured and taught, but also more conceptual aspects, such as the step forward from “learning for life” to “lifelong learning”.

These challenges, which must be seen as opportunities, can only be met through government action, based on careful planning, which can be divided into four basic areas:

- The pre-eminence of academic objectives
- Social commitment
- Good governance
- Caring for people

In accordance with the Strategic Lines of Governance and Plan of Action document, which is attached as an appendix, governance at UPC has been organised by planning different strategic lines and policies of action for the four different areas of activity:

a. Teaching
b. Doctorates, research and transfer of results
c. Society and region
d. Staff, structure and organisation

The document sets out 14 strategic goals, 42 specific goals and 160 actions for improvement that are divided among these four areas, as well as eight other transverse programmes in these areas. The 10 goals of the Programme Contract with the Generalitat of Catalonia have likewise been included. We will limit ourselves to just listing the 14 strategic goals:

Teaching

UPC aspires to become a point of reference for European universities as regards quality and innovative teaching methods, the courses on offer and the attention and the service given to students. At the same time, it must uphold the principles of a public institution, such as the rational use of resources and its influence on society.

1. To design a general structure for modern courses, which is attractive and competitive at national and international levels.
2. To draw up UPC’s multi-year academic programming to the very highest standards.
3. To set up effective measures to guarantee quality learning.
Doctorates, Research and Transfer of Results

Along with teaching, research and the transfer of results to society are the University's basic goals, and as such must be given maximum priority. Moreover, research is what differentiates universities from other institutions of higher education.

4. To devise doctoral programmes of the very highest standards, which are attractive and efficient and that lead to social recognition.
5. To build up policies for science that adapt UPC’s research and transfer of results to society’s need for innovation.
6. To facilitate the research activities of teaching and research staff and the transfer of results, and lessening the management activities associated with them.

Society and Region

This university, which creates culture and transmits culture to its students, must undertake to spread the knowledge that rightfully belongs to society. This must be done through actions ranging from active participation in social debates to the training of citizens in UPC’s fields of specialisation, which thus contributes towards strengthening democracy.

7. To contribute to the creation and dissemination of culture
8. To exploit the opportunity afforded to UPC by its geographic extension to contribute to the region’s development and socio-economic balance.
9. To advance criteria for sustainable development, cooperation and solidarity in UPC’s fields of action.

Staff, Structure and Organisation

The above spheres are the focus of the lines that shape the actions taken by the University’s governing body and that must grant UPC the specificities and the goals to be attained. The first step towards making this possible is to consolidate a model of governance based on a plan drawn up by all of the University’s members.

10. To consolidate a model of governance at UPC derived from planning, transparency, participation and accountability.
11. To establish an organisational structure that coherently combines UPC’s different areas of activity (teaching, research and social involvement) and different levels of responsibility (governance, management and administration).
12. To obtain the appropriate number of staff who are qualified to tackle the institutional goals that are set. This can be done by establishing criteria to determine the size, recruitment process, promotion and payment of staff. As a result, workers at UPC undergo personal and professional development as well as improving their quality of life.
13. To improve infrastructures and facilities to bring about the most conducive conditions for work, study and university life in general.
14. To promote the widespread use of ICTs as a tool for improving academic standards and management, communication and participation, and service to society.

What balance is the institution aiming to achieve in terms of its local, regional, national and international positioning?

It is difficult to reach a perfect balance. UPC’s intention is to be as balanced as possible. In fact, this general premise is applied differently in these four areas. At a local level, collaboration agreements are drawn up between many town councils or local public actors, particularly in the case of the cities or regions in which UPC is established. Such agreements are mainly concerned with environmental questions, renewable energies and urban development. As part of the Autonomous Community of Catalonia, UPC’s involvement is necessarily greater than other institutions as it is Catalonia’s main...
university for technical studies in general, and in many cases the only institution offering them (Civil Engineering, Aeronautics, Mining Engineering, etc.). This is why it is the main repository for know-how in these areas and why it is best placed to work with all of the actors involved in this field. Furthermore, as a consequence of its wide geographic extension, it plays an important part in maintaining the regional balance in Catalonia, particularly in the Province of Barcelona. In Spain as a whole, UPC aspires to be a point of reference in several areas: management and innovation in teaching, applied research (particularly among technical universities), strategic planning, etc. Finally, its goals at an international level, which can be broken down into the four strategic lines, are laid out in detail in UPC's transverse International Relations Plan, which covers the 2003-2006 period.

- What balance is the institution aiming to achieve for teaching, research and its other services?

Once again, it is difficult to reach a perfect balance. However, UPC's aim is to reach the highest levels in all of them, particularly when their interrelation is clearly positive. However, as it has traditionally served as a link for the Schools, teaching has tended to predominate. Therefore, for years UPC has made a substantial effort to improve its research activities as well as the transfer of results. The goals for teaching and research are set out in detail in the first two strategic lines, whilst the other two lines are concerned with improving the quality of other services.

- What are the institution's academic priorities, i.e., which teaching programmes and areas of research are emphasised?

None of the teaching programmes have priority over any other. In fact, UPC makes the greatest effort during the consolidation stage of a programme, whether due to the novelty of the programme, its initial lack of infrastructure or for other reasons. Currently, the main priority as regards teaching is to adapt to the European Higher Education Area (EHEA). It is preferred to reinforce the research lines with greater quality. For example, it is thought to be more appropriate to favour a doctoral programme if it involves a high degree of research activity. For further details, the Research Plan will soon be available for consultation.

- What are the institution's preferred didactic approaches (e.g., case studies, problem-based learning, seminars)?

One of UPC's most significant characteristics is its high experimental content in the field of teaching. For the teaching of theory, the traditional method based on the master class is relied upon: the lecturer explains and the students take notes, even though the lecturer has provided them with texts and other appropriate teaching materials. However, case studies and seminars are used for a number of subjects on the courses available, whilst project-based learning is the only method used for the Master's Degree (second cycle) in Telecommunications Engineering taught at the EPSC. It likewise makes up a significant part of the courses in architecture at both the ETSAB and the ETSAV. Other methodologies such as cooperative learning and alternating learning are also used. The former has been progressively introduced in the diploma course (first cycle) in Telecommunications Engineering at the EPSC, and the latter is used in the recently set up Master's Degree (second cycle) in Automatic Control and Industrial Electronics at the EPSEVG. The Institute of Education Sciences (ICE) promotes educationally innovative activities at UPC. It should finally be mentioned that UPC has managed to attune its teaching methods to fit in with the implications of belonging to the EHEA. This is demonstrated by its full participation in the pilot scheme of the Ministry of Universities, Research and the Information Society (DURSI).
What is the degree of centralisation and decentralisation that the institution aims for?

In order to achieve its strategic goals, UPC is divided into:

a) Basic units, which are directly responsible for carrying out the university's academic activity, that is, schools, departments, research institutes and the ICE.

b) Functional units, which are responsible for giving support to academic activities, management and the university community's services or other units.

The concern for the degree of centralisation and decentralisation at UPC is set out in the report "Decentralisation and the Organisational Structure at UPC", which was drawn up externally at the request of UPC in 2000, after a close examination of how it was run at the time, as stated in Article 146 of its statutes: “The administrative management of UPC is founded on the principles of decentralisation and autonomy of its departments, in accordance with the functions assigned to them within the structure of the University, and of coordination to promote collaboration between departments and staff, thus avoiding the duplication of structures and initiatives”. More specifically, in accordance with Articles 34 and 35 of the Statutes, a structure has been established for the Terrassa Campus, and a similar one is currently being developed for the Baix Llobregat Campus in Castelldefels. As one would expect, some services are initially created as centralised entities. However, as their size increases, they become decentralised.

With regard to the decentralisation of technical services and of academic support activities, on 30 January 2003 the Board of Governors approved the creation of the Commission for Adapting and Rationalising the Structure of Services, Support and Management. The Committee acted throughout 2003 in collaboration with work groups made up of over eighty members of the administrative and service staff and drew up a report (which is often referred to as the "blue dossier"). It describes the situation at the time, the guidelines for a new organisational model and proposals for a structure of services, support and management that must be global, balanced and coordinated, and comply with the University's basic goals: teaching and research. As a result of this study, the management team is currently working on the adaptation of support services based on the decentralisation of the regional campuses. The intention is to provide these structures with more suitable means to meet the challenges specific to the region and its interests.

What should the institution's relationship be with its founding agencies (state and others such as research contractors)?

The Generalitat of Catalonia, through the DURSI, makes the largest contribution to UPC's public funding. Until the start of the first Programme Contract, negotiating budgets with the administration was based on the volume of activity and input. When a university increased its activities, it tried to negotiate more funding. At the beginning of 1997, UPC established a model for signing contracts (the Programme Contract) with the DURSI. Its goal was to receive additional funding in exchange for the results obtained. This model, which has subsequently been applied to the rest of the universities in Catalonia, is unfortunately still insufficient in terms of the overall budget (approximately 1%). The next step that UPC undertook was to transfer this model to its units. It did so by describing the goals and indicators for the latter, in exchange for additional funding (a new framework for the strategic planning of the basic units). Furthermore, UPC holds meetings with other university rectors in order to bring about changes that will make funding more in keeping with present needs.

With regard to research, to date most funding has been obtained by participating in official competitive calls organised by different organisations (the Ministry of Education, Science and Sport, the European Union through its framework programme and the DURSI). Currently the DURSI's Directorate-General of Research has transferred the responsibility for devising strategic research plans to universities. A programme contract is subsequently signed in which details of funding for research are specified. In this respect, UPC is currently working on the definition of its own plan, in which the programme to
define and establish a strategic social agenda is particularly relevant. This makes it possible to work alongside the administration and the various social and economic actors in facing future challenges to support development in certain sectors that are considered to be strategic activities at UPC. Furthermore, work has been carried out, especially within the European Union, in order for the latter to recognise the University’s cost system (currently in the proposals coming from UPC for the various framework programmes, the budgets can be considered from the standpoint of total costs rather than marginal costs, which favours the subsequent funding and monitoring of proposals). One of the other aspects in which UPC wishes to make its mark is in the search for, and common recognition of, indicators to assess and recognise research and the transfer of results, both within funding systems and in recognising the tasks carried out by the teaching and research staff, which are therefore also valid for professional advancement.

- **What should the institution’s relationship be with society (external partners, local and regional government) and its involvement in public debate?**

The **Board of Trustees** is society’s organ of participation in the University, through which the latter determines society’s needs and expectations. It is composed of representatives from various institutions and sectors of society, as well as from the University. Its president is recommended and appointed by the Generalitat of Catalonia. The Board of Trustees’ functions include drawing up the University’s strategic plan, approving and handling the University’s budget, and assessing the quality and performance of activities. Likewise, it is responsible for electing UPC’s University Ombudsman. In the last academic year it held nine meetings.

The Board of Trustees is run by means of plenary sessions, through which agreements are reached. The subjects discussed at the plenary sessions are put forward by a number of committees. There are currently three: the Academic Committee, the Auditing Committee and the Cultural and Social Action Committee. Moreover, for more specific and temporary purposes, commissions can be set up, such as the Commission for Grants and Other Forms of Aid for Students, which is currently operating.

Furthermore, one of the main lines defined by UPC in its plan of action is that known as Society and Region. It mainly determines the actions taken by the Vice-Rectorate of Teaching and University Extension and the Vice-Rectorate of Regional Promotion and Integration.

Goals 7, 8 and 9 of the 2003-2006 Strategic Lines of Governance and Plan of Action establish the goals and actions to be taken as regards the University’s relations with society.

- **What should the institution’s policy regarding International relations be (at European and International levels)?**

Over the last few years, UPC has continually fostered a policy of international relations. A good indication of this is UPC’s participation in CLUSTER (Cooperative Link between Universities of Science and Technology for Education and Research), which is made up of 11 of the best technical universities in Europe. Its links with Latin America can be seen in its membership of CINDA (Inter-University Development Centre), to which the most prestigious Latin American and European universities belong. Other international networks are CESAER (Conference of European Schools for Advanced Engineering Education and Research), TIME (Top Industrial Managers for Europe), UNITECH, EUFORIA and the CRE (Conference of European Rectors).

UPC participates in the main international mobility programmes (Socrates, Erasmus, Comett and Intercampus). Through these programmes, during the last academic year more than 800 students from UPC spent periods at other universities abroad. Some of UPC’s schools have bilateral double-degree agreements thanks to which students are able to do part of their degrees at UPC and another part at another university, obtaining a degree from both.

The International Relations Plan, which was renewed in 2003, is a transverse plan aimed at supporting, and at the same time promoting, the University in its main areas of activity: teaching and research. One of the Plan’s main lines of action has been to promote student exchange programmes...
between schools of UPC and those of other European universities. This has mainly been made possible by creating an awareness for this need in the various schools, which has involved setting up support services and other necessary bodies.

Naturally, one of the University’s main challenges at present, on which it has been working for some time, is that of setting up the way courses are structured in accordance with the Bologna Declaration. A particular concern is adapting syllabuses to the ECTS credit system. Greater transparency within the education system will significantly contribute to recruiting excellent students for the three cycles.

The regulation of external mobility for UPC’s teaching and research staff is intended to provide an incentive and offer them support in their stays at universities and research centres outside Catalonia. This serves as a means for the staff at the university to go abroad and learn from new experiences, as well as to add to their field of knowledge, and to carry out projects in collaboration with lecturers and researchers from other universities and research centres, etc. There are also mobility programmes addressed to administrative and service staff.

A.2 Constraints and opportunities

UPC’s framework is defined by the basic legislation of the Organic Law on Universities (LOU) and the Catalan Universities Law (LUC).

- Evaluation of institutional autonomy

Selection, appointment, promotion and dismissal of academic (teaching and research) and administrative staff

UPC only has partial autonomy in the process of recruiting its teaching and research staff. By law, prior to selection by UPC, candidates must undergo an external evaluation (authorisation and accreditation). Once candidates have been authorised and accredited, UPC has full control of the recruitment process. This decentralises the process, as schools and departments are ultimately responsible for the final decision. Promotion is non-existent in its strictest sense, given that access is open to all authorised and accredited candidates.

It can be said that UPC has total autonomy to select and promote its administrative and service staff and these functions are shared between the units (schools and departments) and the central services.

Dismissal is practically impossible for permanent staff of either type. Basically, after their first years at UPC, permanent staff cannot be dismissed. The above does not apply to staff bound by agreements and projects, who are given temporary contracts.

Goal 12 includes UPC’s initiatives regarding this subject.

Selection of students (including adult learners)

The principal means of access to UPC is by passing the PAAU (the Spanish university entrance examination) at the end of secondary education. Students are admitted to the courses at the different schools according to the marks they obtain in these exams and the number of places available on each of the teaching programmes. This same procedure is employed by all universities in Spain, Catalonia (rather than each university) being what is known as an Open Catchment Area. This is why Spanish universities, and UPC in this instance, are not allowed to select future students. Analogous circumstances arise in the other main means of access to UPC (students from vocational training courses to first cycle courses). A separate case is the Interdisciplinary Training Centre (CFIS). Candidates at this centre are selected according to their curriculum vitae, in addition to which they take objective personalised tests.

There does exist the possibility of selecting students for admission to the second cycle after having completed their first cycle courses or for admission to the third cycle. In both cases, an internal
selection process takes place. It is likewise possible to select candidates for continuing education courses, although this is highly unusual. Within the framework of the European Higher Education Area, students for degree courses may not be selected, whilst those who opt for a master's degree may.

Within this context, it is possible to promote the courses on offer in order to attract the best students. UPC has engaged in several actions included in UPC’s transverse Course Promotion Plan: presentations at secondary schools, attendance at the Education Fair, open working sessions at schools, web pages aimed at informing potential students, various actions on the transverse DONA Programme (aimed at attracting female students), lectures, prizes, etc. As a result of all of this, UPC can pride itself on having admitted most of the students with the highest marks in the university entrance examination in Catalonia. Likewise, it has been less harder hit than other universities by the fall in overall student demand. This has happened despite the well-known fact that UPC is more demanding than other universities.

**Teaching and learning (creating and closing down faculties, levels of degrees, study programmes, specialities within a study programme, course units, didactic approaches)**

UPC has a certain degree of autonomy in starting up new courses, as well as being able to modify them. However, these actions require external approval (from the DURSI or the MECD). The most recent examples of this have been the setting up of an Aeronautics course in 2002, the creation of the CFIS and alternating courses in Automatic Control and Industrial Electronics at the EPSEVG in 2004, and the Degree in Building Construction (second cycle) at the EPSEB in 2003. In long-established courses, it is possible to create or withdraw some of the course units, thus keeping up with technological changes. Other subjects are of such a nature that they are essential to all courses at any Spanish university, which means they cannot be withdrawn. The absolute withdrawal of some study programmes has raised a number of problems (the existence of permanent teaching staff, unused facilities, presence in the location in question, etc.) that make it impractical to withdraw them. It would be even more difficult to close schools down. A half-way solution between these extremes is a withdrawal in the long term of certain areas of specialisation within a study programme.

The modification of didactic approaches encounters all the usual obstacles (academic freedom, pedagogic training of the teaching staff, etc.), but this task is made easier at UPC by the ICE’s activity. In spite of this, UPC can be said to enjoy an acceptable degree of innovation in teaching. A case in point is the fact that UPC organised the last two National Conferences on Innovative Teaching Methods in Engineering. Their success has been such that a new service has been set up called the “Teaching Resources Exchange”, a common initiative between the University Library, the ICE and the INTEL company. This service, located in the library, is addressed to the teaching staff at the University. Its aim it to provide support to the creation of new digital objects and multimedia teaching materials to be used for distributed learning.

**Research (creating and closing down research laboratories, individual and team projects)**

UPC has total autonomy in the creation, restructuring and closing down of its centres and research laboratories, and various recent examples can be cited in all three cases. This power to take actions obviously diminishes in the laboratories in which UPC shares control. Almost all research projects, on both an individual and a group basis, receive external funding. Therefore, UPC’s actions are limited to promoting their development.
Development of entrepreneurial activities (spin-off companies, science parks, incubators)

In 1998, UPC set up the Innova Programme for the promotion of the culture of innovation and the entrepreneurial spirit throughout the university community. This has contributed to an increase in the innovative potential of companies and has favoured the creation of new companies. The foundations for the project were laid in 1999. During this period, a strategic plan was drawn up, and six new technology-based companies were set up as a result of the first business projects.

Likewise, the two pillars of the Innova Programme’s mission were established: Innollavor (dissemination and training for promoting an entrepreneurial spirit) and Innocreació (monitoring and technical support for the companies created). Another branch of the Innova Programme is Innoxarxa (national and international networks).

From the outset, services and strategic lines have been designed and improved that give the Programme meaning. To date, the most noteworthy results are as follows: a total of 100 companies have been started up; for the current academic year, 76 business projects have been approved; this year, over 400 students have enrolled for subjects and programmes in the Innova Programme and a total of 1731 people have taken part in presentations, seminars and courses; the Programme has gained national and international renown thanks to the presentations, seminars, forums and debates that have been held during this academic year.

The effort made to support the start-up of technology companies has been recognised for the second year running with the CIDEM award for the Best Technology Springboard.

At present, and during the 2003-2006 period, the greatest challenge facing the Innova Programme is to consolidate itself as a point of reference for Spanish and European universities, by encouraging entrepreneurial activities by researchers, and by creating technology companies.

Furthermore, UPC participates in Innova31, which is a venture capital company set up in 2001. Its goal is to promote and invest in fledgling business projects by providing capital in exchange for a share in the company.

Finance (degree of autonomy in the institutional allocation of government funds, ability to raise its own funds, asset management)

Discounting the fixed budget items corresponding to Personnel (47.93% of the 2004 budget), Research Programmes (17.36% of the 2004 budget), and Financial Expenses (4.13% of the 2004 budget), approximately 27.69% of the budget remains for UPC to use for university policies. It must be kept in mind that a large share of fixed expenses is deducted from this quantity for the maintenance of infrastructures and buildings (11.16% of the 2004 budget). Therefore, it can be said that UPC has autonomy in the management of the expenditure for current goods and services: 3% of the 2004 budget was managed on a decentralised basis, and 12% was dedicated to investments and buildings (specific funding through the multi-year plan of university investments).

- Evaluation of the current regional and national labour-market situation

The Careers Guidance and Integration Office (OOIL), dependent on the Association of Friends of UPC, periodically carries out a study of the labour market for UPC graduates. The following conclusions from its last available report (2004) are worth pointing out:

- Most sectors of the job market are going through a period of economic recession.
- Companies are increasingly searching for people with versatile backgrounds, who are able to adapt to new situations. The evaluation of personal skills and abilities, such as communication, teamwork and leadership skills, is highly important. Professionals must also be motivated and involve themselves in the company's goals. UPC graduates have been found to be wanting in their communication skills. Companies place a great deal of importance on work placement experiences and a knowledge of foreign languages (the latter has also been found to be wanting, although significant progress has been made in this direction in recent years).
- UPC graduates are considered by companies to have a sound technical background.
Evaluation of the infrastructure in relation to the number of students and staff: number and size of buildings, facilities, laboratories, and libraries; their location (e.g., dispersed over a large geographical area or concentrated on a single campus); age and condition of the facilities

The Vice-Rectorate of Buildings has all the information needed to analyse the amount of space available and to draw up indicators that determine the extent to which space is being used. In order to do so, it carries out a comparative study of units, whose ultimate goal is to determine the present standards of facilities, which helps to prioritise future actions.

In this study spaces are classified according to their type. The most significant data for assessing infrastructures according to the number of staff and students are as follows:

- Average useful floor area in m² per person: 15.81 m²
- Available floor area in m² per administrative and service staff member assigned to schools: 10.10 m²
- Available floor area in m² per full-time student for theory classes: 2.11 m²
- Available floor area in m² per full-time student for practical classes: 5.55 m²
- Library space in m² per full-time student: 0.45 m²
- Rooms (lecture theatres, study rooms, etc.) in m² per full-time student: 0.4 m²

Each year first and second cycle students are asked to fill in a questionnaire to assess UPC, which includes a question about the adequacy of facilities (1). The average score obtained from all the students who filled in the last questionnaire (on a scale from 1 to 5) was 3.24. The scores below 2.5 represented 6.1% of the total. However, it must be remembered that the aforementioned question does not refer exclusively to the adequacy of facilities, and one must therefore be wary of making comparisons.

Evaluation of the student/staff ratio (lowest, highest and mean ratios)

The following table shows summarised figures for lecturers and students, as well as the student/staff ratio at each school (the figures are for the 2003-2004 academic year).

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<tr>
<th></th>
<th>Number of lecturers</th>
<th>Number of students</th>
<th>Students per lecturer</th>
</tr>
</thead>
<tbody>
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<tr>
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<tr>
<td>ETSETB</td>
<td>238</td>
<td>2812</td>
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<tr>
<td>ETSEIB</td>
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<td>FIB</td>
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<tr>
<td>FNB</td>
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<tr>
<td>ETSAB</td>
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<tr>
<td>EUOOT</td>
<td>64</td>
<td>537</td>
<td>8.4</td>
</tr>
</tbody>
</table>

1 Question P4: “Are the conditions (space, materials, facilities...) in which this subject is taught adequate?”
The average number of students per lecturer, which is between 8.4 and 17, may be considered acceptable. It is quite normal for smaller schools, such as the EUPM and EUOOT, to have fewer students per lecturer. Many lecturers from other schools teach at the FME and are not taken into account here, so the figures are unrepresentative. Unusually high numbers of students per lecturer are only found in the FIB and the EPSEB.

B. How is the institution trying to do it?

- Academic activities

The academic model of UPC

When university courses were modified as a result of the University Reform Law of 1987, UPC took the opportunity to overhaul its academic model. The fundamental aim was to improve courses by designing syllabuses that responded to real educational needs by taking an overall approach to the objectives and establishing the mechanisms for achieving them. Once this model had been implemented in all the courses, a process of revision and improvement was undertaken in 2001, which drove further changes. New objectives were established in view of the experience gained from the previous reform and the foreseeable evolution of universities in general.

The fundamental characteristics that define the current academic model of UPC are the following:

- The syllabuses are divided into areas. In each course, the first syllabus area is called the selection stage. The aim of this stage is to ascertain, within one or two semesters, whether the student is able to follow the course at the foreseen cost. It also serves to bring all the students up to the same standard and facilitates the rapid academic reorientation of students who do not pass this stage towards courses to which they may be more suited. This avoids the high personal and social consequences of dropping out later in the course.

- Students are assessed in two ways: for each subject and for each syllabus area. With regard to the individual subjects, continuous assessment mechanisms have been established that take into account a student's work over the course of the year and help him or her to attain the objectives established for the subject. By applying general criteria, a committee assesses a student's performance in a syllabus area once he or she has taken all the subjects in it. This system favours the learning processes and has resulted in an improvement in academic results and a bridging of the gap between the theoretical duration of the courses and the time it takes students to complete them in practice.

- The courses are divided into semesters, which means that a student who has not passed a subject can take it again the following semester, at least during the selection stage. This has meant that students can be admitted to certain schools in February and has also enabled the autumn semester to be used to provide students who have already been admitted onto a course with an induction course, which is designed to guide them and to bring their knowledge up to a given standard.

The academic framework at UPC also foresees, by means of the minimum academic progress requirements, a degree of flexibility that it is hoped will improve the academic performance of those who study whilst in full-time employment. In 2003, UPC approved the Tutorial Action Plan, which officially recognises the tutorial system that had already been a part of some qualifications and makes provisions for a student guidance service, through which lecturers provide students with information, training and advice. Tutorials are designed to help students adapt to university, to improve their learning and academic performance, and to offer advice on specialisation and careers, all of which serves to increase their chances of successfully accomplishing their academic goals.
The University is currently engaged in debating a new teaching model. At the centre of this debate is a document containing 28 proposals, from which it is hoped that strategic criteria will be defined for teaching at UPC within the framework of the European Higher Education Area. Once these criteria have been defined, more binding agreements will be sought in the areas of academic programming, the design of syllabuses, teaching innovation and assessment systems.

The integration of UPC's courses in the European Higher Education Area

UPC is actively participating in the process of European convergence in higher education; in fact, it has become an observatory and agent of the process with relation to the Catalan and Spanish governments. The University participates as an institution in debating and working committees organised by the Conference of Rectors of Spanish Universities (CRUE), the Agency for the Quality of the Catalan University System (AQU) and the National Agency for Quality Assessment and Accreditation (ANECA). These committees carry out projects related to European convergence, which involve tasks such as defining the European Diploma Supplement, harmonising Spanish qualifications and designing qualifications for the new framework.

Internally, UPC drew up a work plan for achieving the full integration of its courses in the European Higher Education Area. To this end, various informative sessions and forums for debate have been organised, with the aim of defining the University's position and the strategies to be followed, especially with regard to different approaches to adopting the Bachelor/Master's Degree model for technical courses.

Strengths

- The receptiveness of the University's unipersonal and collegiate bodies, who are convinced of the social outreach and future potential of the proposed change in the teaching paradigm.
- The practical experiences that the University undertakes in different spheres, including adapting structures and educational methods and acquiring the knowledge and maturity needed to face the change realistically and coherently.
- The University's commitment to quality, which is one of the strategic lines of the Bologna process.

Weaknesses

- The low standard of knowledge of foreign languages, particularly English, on the part of students and graduates of UPC.
- The undefined nature of the educational profiles of the various syllabuses, which are based on subject descriptions and not on the educational goals that students need to work towards (skills and abilities, learning speed, etc.).
- The current lack of definition of the process of homologation of qualifications in the framework of the EHEA by Catalan and Spanish governments (although this process is to be defined during 2005).
- The highly demanding nature of the technical courses that lead to regulated professions. The regulation of the professions linked to technical qualifications is a complex issue.

Doctoral Programmes

UPC offers a total of 47 doctoral programmes in its areas of knowledge.

At UPC, there is a conviction that if research is to improve, not only at the University but in society in general, this necessarily involves improving third cycle courses, integrating researchers in the private sector, gaining greater social recognition for doctorates and redefining the programmes that are currently taught, with a particular emphasis on interdisciplinarity. Although regulatory changes by the Spanish government are needed if UPC is to bring its courses closer to the principles of the Bologna Declaration, nevertheless there are steps that UPC can take in this direction in the meantime.
With reference to doctorates, the fourth aim in the strategic governance lines and plan of action for 2003-2006 defines the following objectives and initiatives:

4. The need to design first-rate, attractive and effective doctoral courses that foster social recognition.
   4.1 To consolidate a first-rate offer of fully accredited doctoral courses that are international points of reference.
   4.2 To foster the social recognition of doctorates.
   4.3 To improve the efficiency of doctoral courses.

The actions carried out in pursuit of these objectives were as follows (for further details on the University's strategic lines and plan of action, see http://www.UPC.edu/planificacio):

- To strive for the Quality Award (awarded by the Ministry of Education and Science upon the proposal of ANECA) for the doctoral programmes of UPC. Forty-one programmes were presented as candidates in 2002, of which fourteen were successful. These awards were again obtained in 2003, and ten more awards were obtained. With the coordinators of the forty-seven programmes, an analysis has been made of how previous applications could be improved.
- Meetings were held on the subject of the Erasmus Mundus programme to encourage university representatives to establish strategic agreements for joint master's degrees. UPC participates in three of the nineteen programmes approved by the European Union and coordinates one of them, the Master of Research in Information Technologies, which is organised by the Department of Signal Theory and Communications.
- UPC has collaborated with the International Graduate School of Catalonia (IGSOC) with the aim of increasing the use of the English language in UPC's doctoral programmes.

**Strengths**

- The implementation of the Quality Award system as a useful tool for increasing the quality and management of the programmes. UPC obtained twenty-four Quality Awards out of a total of forty-seven doctoral programmes, and was the second university in Spain in number of awards. In support of its continuous improvement policy, UPC believes that, when it comes to allocating resources and grants, both the government and the University should favour those programmes that have been granted the Award, and that the programmes that have not been granted the Award should be restructured.
- Among other things, the periodic review of existing regulations, the introduction of the minimum research capacity and the tutoring of students who are involved in research have enabled a more constant and more accurate monitoring of doctoral students.
- The recognition of tutorship credits as part of the new personalised academic assignment is a priority in the endeavour to improve doctoral students' performance.

**Weaknesses**

- The existing doctoral programmes are largely a response to the demands of groups of researchers; they are not, as they should be, the result of careful planning in agreement with the requirements of the organisation.
- The relative absence of actions that provide incentives for the employment of researchers in the industrial sector.
- The excessive duration of doctoral theses.

**Research and transfer of results**

As a technical university, UPC has for many years been aware of the fundamental role it plays in its immediate environment, not only in terms of basic research, but also in the transfer of results to the business sector, which gives the research added value. So that the research and transfer of results may be planned, monitored and carried out as effectively as possible, services, tools and units have either been reorganised or, in some cases, created from scratch.
The University has been responsible for other initiatives in this area, such as the creation of research groups; the participation and involvement in technology parks such as the Mediterranean Technology Park; the creation of technology centres such as the Bages Technology Centre and the Vilanova i la Geltrú Technology Centre; and, more recently, the creation and promotion of K2M and the i2Cat Foundation (organisations that have facilitated the spreading of knowledge to the industrial sector).

The creation, by UPC and the Technical University of Madrid, of the Agency for Accreditation in Research, Development and Technological Innovation (AIDIT)—the first agency to officially endorse companies for the tax deductions that are available for research, development and innovation—is a further example of the social commitment of UPC in this field. One of the issues that is to be discussed in view of the new research plan is how to use AIDIT to guarantee the quality of the technology transfer and research carried out at UPC.

A research monitoring policy has been in place at UPC for many years. It serves as a basis for the internal allocation of resources to support research, such as prioritisation in the awarding of grants to research centres by the Directorate-General of Research, prioritisation in training scholarships for researchers and the awarding of grants for organising conferences or for mobility. One of the challenges that the University faces in designing its new research plan is the need to simplify assessment processes and indicators and to adapt them, as far as is possible, to each of its areas of expertise. This is already happening in the area of architecture and urban design at UPC.

**Strengths:**
- Several areas excel in terms of scientific output.
- The significant increase in external funding as a result of research and technology transfer.
- The significant increase in the number of activities related to innovation.
- The experience gained in measuring research activities (research points and technology transfer points).

**Weaknesses:**
- A great number of teaching and research staff do not carry out research, largely because they do not have the appropriate training or because they continue to see their job as only involving teaching.
- Resources to support research are clearly limited, which means that active groups often have to pay for assistants, equipment and even, in some cases, part of the infrastructures themselves.
- The absence of proactive management of intellectual property rights.
- The internal structure of the University often shows a lack of flexibility in responding to the need for personnel and funding in research and the transfer of results.
- The structure of the University often makes it difficult to respond to the needs of specific projects (for personnel, financial management and so on).
- The non-transverse nature of the research activities, and a lack of efficiency in the use of resources.
- A lack of continuous monitoring of the level of satisfaction of the receivers of technology transfer and the level of satisfaction of teaching and research staff with the support services for research.

One of the first initiatives taken to counter these disadvantages has been to draw up a map of the research groups currently operating at UPC. At present, a research plan is being drafted to cover the period leading up to 2010, which aims to make the University a point of reference in the fields of research, development and innovation.
Analysis of student support services

Beyond the classrooms and laboratories, there are services and facilities designed to make it easier for students to devote themselves to studying and to enable them to make the most of their free time.

Libraries

UPC has 13 libraries with 3,000 reading places, rooms for working in groups and individual study places. Users have access to 500 PCs that are connected to the Internet. The bibliographic collections hold 470,000 documents and 19,000 different journals that may be consulted from Webpac. The complete texts of more than 2,500 e-books and 7,000 scientific and technical e-journals are available at the digital library (bibliotecatca.upc.es). The digital library also gives access to UPC's scientific and teaching output, in the form of journal articles, theses, databases, online examinations, software, digital objects, etc. A digital video archive and virtual language laboratory are currently being built.

Computer services and Internet access

UPC has 90 computer rooms and rooms open to all users, containing a total of 3,000 workstations. There are also various spaces connected to the Internet, including more than 250 connection points. In addition to this, UPC provides its members with an e-mail account on UPCNET, the server used to access the Internet at the University, a personal e-mail address and space for publishing their own website. Student intranets and intranets for the purposes of course management can be found on most of the schools' websites.

Scholarships and financial aid

Students at UPC can apply to the Ministry of Education and Science for general grants, mobility grants and grants for collaboration with departments. The University itself assigns part of its budget to awarding scholarships to students who wish to take part in training assignments. Students in the final years of study may also obtain scholarships to collaborate in research projects, to gain work experience abroad or to participate in mobility programmes such as Socrates, Intercampus and Sicue. Grants are also awarded for study trips.

Univers, the University's social activities service

Univers coordinates everything that students need to complement their education whilst also enjoying their free time, such as sports, theatre and films, and a wide range of courses, workshops and cultural activities. Students who are members of Univers get great discounts at theatres, cinemas, shopping outlets and even when obtaining a driving licence. It aims to be a catalyst of the activities and initiatives that may arise out of the schools and departments at UPC.

Halls of residence

UPC has five halls of residence for students: three in Barcelona, one in Terrassa and one in Vilanova i la Geltrú. All the halls of residence at UPC have several floors and rooms that are fully furnished and equipped with a telephone, bathroom and kitchen. There are also shared amenities, such as study rooms, gymnasiums and laundrettes. The Torre Girona Hall of Residence in Barcelona is more like a hotel and has a number of places for short-term stays.

An appraisal of the availability of halls of residences at UPC shows that there are insufficient places to meet demand.

Promoting social life at UPC

As stated in the University Statutes, UPC is keen to promote cultural activities and sporting events for the university community to take part in. To this end, given that the associations and offices that organise many of UPC’s cultural and sporting activities are staffed voluntarily, a system of grants has been established for these associations and offices, in order to help them promote and extend an awareness of culture and sport. The aim of awarding grants for cultural and sporting activities is to promote proposals in which university members have spaces in which they can relate and develop their intellectual, scientific, technical, social, cultural and sporting concerns.
Finance

To carry out a range of activities and make investments, each year the University has two basic sources of funding: government subsidies and its own funding.

The subsidies awarded by the Generalitat of Catalonia are its main source of income. They are based on the "Model for Distributing Funding to Public Universities in Catalonia". The model does not include public funding for investments or for R&D at universities. Up to 2004, the Generalitat of Catalonia distributed these subsidies for the functioning of universities according to the following criteria:

1. A fixed amount for all universities.
2. A basic amount calculated according to: 1) the number of total hours for which students are registered, 2) the number of new students, 3) the number of graduates, and 4) the floor area of the university.
3. An amount calculated according to the number of teaching and research staff employed.
4. A strategic amount linked to the aims of the University's policies as agreed by the DURSI and the University (the Programme Contract) and the launching of new qualifications.
5. Concurrent amounts for DURSI initiatives that simultaneously affect all the universities (grants for teaching innovation, language policy initiatives, etc.)

Academic fees have traditionally been the most important source of the University's own funding. Other sources of funding have become increasingly important:

- The transfer of the results of research, through agreements signed by the University upon the proposal of a lecturer in his or her own name or in name of a department or research group.
- The participation in competitions for research grants that are awarded by the administration that is responsible in each case.
- Continuing education, which led to the creation of the Technical Foundation of Catalonia for the purposes of organising courses in this sphere and guaranteeing the quality of the courses' design, teaching and management, in keeping with supervision and the criteria set out by the University.
- Funds from companies for other academic purposes, such as the creation of company chairs.
- Funds for the promotion of cooperation agreements between companies and the schools of UPC, which allow students to carry out work placement at companies and subsequently to add this to their CVs.

This last source of funding has enabled a great number of activities to be carried out by the schools in recent years and has driven many of the strategic objectives that have been set out.

During 2004, UPC launched the UPC 21 programme, which is designed to enable funds from the private sector to be raised by the University in a more proactive and coordinated manner.

Source and destination of the income: comparison of the budgets for 2003 and 2004

Source: UPC budget

<table>
<thead>
<tr>
<th>Sources of funding (expressed as a percentage of the total)</th>
<th>2003</th>
<th>2004</th>
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<tbody>
<tr>
<td>Generalitat</td>
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<td>50.41</td>
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<td>University's own funding</td>
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<td>Spanish government</td>
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<td>Debt</td>
<td>5.48</td>
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<td>European Union</td>
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<td>4.13</td>
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<tr>
<td>Investment by Generalitat</td>
<td>3.2</td>
<td>4.13</td>
</tr>
<tr>
<td>Other public bodies</td>
<td>4.57</td>
<td>2.89</td>
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<tr>
<td>Total</td>
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<td>100%</td>
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### Allocation of funding

<table>
<thead>
<tr>
<th>Allocation of funding (expressed as a percentage of the total)</th>
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<th>2004</th>
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<tbody>
<tr>
<td>Staff</td>
<td>49.32</td>
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<td>Research programmes</td>
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<td>Functioning</td>
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<td>16.53</td>
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<tr>
<td>Building work and facilities</td>
<td>10.96</td>
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<td>Financial costs</td>
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<tr>
<td>Others</td>
<td>2.74</td>
<td>2.89</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

### Economic and financial management

The University has three tools for managing its economic and financial resources, which are designed to fulfil the requirements of the basic units, the priorities of the Board of Trustees and the directives of the Board of Governors: the budget, the long-term investment plan and the programme contract.

Every year, UPC approves and publishes the budget, which is organised by programmes and which brings together the aims of the Governance Plan, the activities scheduled and the resources needed to carry them out. Policy-makers (members of the Board of Management) and technical and management staff are appointed, and it is their mission to meet the objectives set out for the coming year by the University (see the corresponding balanced scorecards in the budget).

### Budget figures by programme

<table>
<thead>
<tr>
<th>Budget figures by programme</th>
<th>2003</th>
<th>2004</th>
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<tbody>
<tr>
<td>Teaching</td>
<td>49,726,034</td>
<td>52,877,777</td>
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<tr>
<td>Doctoral programmes, research and the transfer of results</td>
<td>71,236,794</td>
<td>77,875,859</td>
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<td>Society and the region</td>
<td>4,064,035</td>
<td>4,312,028</td>
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<tr>
<td>Staff, structure and organisation</td>
<td>86,882,622</td>
<td>97,557,974 (*)</td>
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<tr>
<td>Debt and acquisition of assets</td>
<td>7,412,106</td>
<td>10,212,000</td>
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<td><strong>TOTAL</strong></td>
<td><strong>€219,321,591</strong></td>
<td><strong>€242,835,638</strong></td>
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</table>

(*) includes the budget for staff except the budget for teaching and research staff, which has been included in programmes 1 and 2. Source: UPC Budgets (2003 and 2004)

For 2005, the aims of the Governance Plan continue to be the following: to strengthen academic activity; to implement a new staff policy; to execute the long-term plan for investment in existing buildings; to increase ICT resources and external funding.

### Multi-Year Plan of University Investments (PIU)

The PIU covers a period of six years (2001-2006) and foresees all the investment in university infrastructure, teaching facilities and general services. The total amount foreseen in the Plan is 402 million euros. The indicators used to distribute the aforementioned amount among public universities in Catalonia are the surface area used for the carrying out of academic activities and the number of full-time students on each course and at each university, in addition to other factors. At UPC, this represents an investment of approximately 77 million euros for this period.

### The Programme Contract

The Programme Contract is a management tool that facilitates the relationship between the public administration, which is responsible for university and science policy, and the University, whose functions are teaching, research and service to society.
**Strengths**
- The Programme Contract has been an opportunity for UPC to create a shared culture of common objectives, which involve improving the results of teaching and research, and also an opportunity to commit to accountability to the government and society, in exchange for maintaining the independence of the University.
- The characteristics of the courses and academic activities of UPC have meant an exponential increase in the funds raised by transferring academic results and fostering collaboration agreements linked to teaching, such as agreements for academic cooperation and continuous training.

**Weaknesses**
- The system for distributing university funding is almost exclusively centred on the input and volume of the activities and not on results. Initiatives launched to improve efficiency, such as to improve the flow of students and of continuous assessment, have sometimes had a detrimental effect on the funding available at UPC, because they have led to a decrease in the total number of credits enrolled for by students and therefore in the funds received as a result of this.
- The effect of the Programme Contract on the budget constitutes an increase of approximately 1% of the total, which invalidates the effort devoted to it.
- The University's need to develop and grow, in conjunction with insufficient funding, has led to an increase in the deficit and indebtedness of UPC and of Catalan universities in general, which obviously has a negative effect on the University's development.
- The decentralisation of the budget towards the basic units represents 12 million euros (6.4% of UPC's total budget). Despite the fact that this constitutes an increase with respect to the previous year and is likely to continue to increase in coming years, it is not thought to be sufficient by the units, and serves almost exclusively to cover ordinary expenses.
- The current model for distributing funding to universities in Catalonia does not take into account the fact that UPC is a technical university whose courses have a significant experimental component and that it is not concentrated in one location.

UPC is working with other universities to bring the funding of higher education and research closer to European standards, which will allow Catalan universities to compete with other higher education institutions on an equal footing. To this end, the main policies for change that are foreseen are the following:

- The DURSI has stated the need to reorganise the funding system, basing at least 10% of it on the results achieved by the universities from 2006 onwards.
- To establish a proactive policy of fundraising via the UPC 21 programme.
- To improve the current level of funding raised from continuous training activities and the return from bodies associated with UPC.
- To increase the return on the transfer of research results.
- To increase, through negotiations with the DURSI, the income from basic subsidies, by raising awareness of the special nature of UPC as a university that is heavily involved in experimentation and that is not limited to one geographical location.

**Management activities**
Governance at UPC is carried out through formal channels, which represent the interests of different collectives, provide information or offer consultancy services, such as the governing bodies. It is also carried out with other tools promoted by the University itself, which encourage the participation of the entire university community (students, teaching and research staff and administrative and service staff).

**The bodies of the University**
The Rector is the highest academic authority of the University, and he represents and directs it. He or she is chosen from among the body of civil servant university professors by the members of the university community by means of a weighted universal vote, for a four-year term. The Rector appoints the Vice-Rectors and the Secretary-General, who will assist him or her in the post, and also appoints the Manager, who is responsible for managing the administrative and financial services of the University. Together, these officials make up the **Board of Management**, which currently has thirteen members.
The Board of Governors is the governing body of the University. It establishes UPC's strategic lines and the directives for applying them in the academic, financial and management spheres, and ensures the fulfilment of the University's Statutes and regulations and the motions passed by the Senate. It meets approximately once a month. It is divided into eight committees, whose work focuses on different fields: Teaching; Research; Society and Region; Personnel and Social Action; Finances and Infrastructures; Libraries and Documentation; Development of the Statutes; and the Standing Committee.

All levels of the University are represented in the University Senate, which has the final say as regards establishing internal regulations, the control and the expression of the position and aspirations of the University. It meets at least once a year.

The three hundred and three people who represent the various sectors of the university community in the University Senate are elected by a secret, direct and unweighted voting process that is open to all members of the university community. Most of the members of the Board of Management and those who make up the school, departmental and university research institute councils are ex oficio members by merit of belonging to a specific office, and their elected members comprise the representatives of the teaching and research staff, the representatives of the administrative and service staff and the representative of the undergraduate and graduate students.

The school, departmental and university research institute councils inform and advise the Rector, who presides over them, and they are convoked to debate university policies and regulations before these are approved and take effect.

The Advisory Board is the ordinary body in charge of advising the Rector and the Board of Governors in academic matters and is able to formulate proposals and publish reports on the queries made to it by any university body concerned in a matter. The Advisory Board is made up of the Rector, who presides over it; the Secretary-General, who also acts as secretary-general of the Advisory Board; and forty more members so designated by the Board of Governors, at the Rector's instance. These members are lecturers and researchers of recognised prestige, who represent all the thematic areas within the University's scope, in addition to any additional members the Rector sees fit to appoint, at least eight of whom must be from outside the UPC community.

The University's Committee for Selection and Assessment of Teaching and Research Staff (CSAPDIU) is ultimately responsible for the assessment of UPC's teaching and research staff and for presenting the proposals of the members of the admissions or selection committees to the Rector. The CSAPDIU consists of ten members of the University's teaching and research staff, who hail from different fields, and who have ample experience in teaching and research. A further two members must be students, one of whom must be enrolled in a doctoral programme.

The bodies of the basic units

With regard to the basic units, the governing body that most directly represents each school is its school board, and in the case of the departments and university research institutes, the respective councils. Both bodies are made up of a management team and representatives of the university community and the unit.

The director is the final academic authority in terms of representation and management. He or she is chosen from amongst the PhD holders on the civil service teaching staff by the members of the university community belonging to the unit. Each basic unit is governed by its own regulations and by the UPC Statutes.

Channels of representation, participation, information and support to decision-making

In addition to the governing bodies and the formal channels for decision-making, UPC possesses other means of promoting participation, communication, information, transparency, accountability and support to decision-making in the activities undertaken by the institution and between its members, such as:
• The Student Council
• Trade Union Representatives
• The University Ombudsman
• Board of Management Open Forum
• The UPC website, especially
  o the new staff intranet
  o the Digital Campus
  o the Bibliotècnica digital platform
• The University’s monthly newsletter Informacions, alongside other sources of information such as
  UPC video clips and "Agenda" (in progress).

Organisation and Management
Despite the existence of the aforementioned bodies, one can make the point that UPC, due in part to
the manner in which it was set up (via the unification of a number of separate schools and research
institutes), continues to maintain a large degree of decentralisation, especially with regard to:

• Decision-making regarding the resources managed by the unit due to decentralisation: allotments
  for general functioning and funds raised externally.
• Organising teaching in accordance with the structuring and general lines of organisation of the
  syllabuses approved by the governing bodies.
• Establishing new systems for training or for assessing the progress of students.
• Establishing collaborative relationships with other units or external organisations.

Strengths:
• The centralisation of the administrative and service staff selection processes, which allows the
  units to play a special role in defining the profiles of the posts to be filled and in participating in the
  selection committees, has helped to guarantee a greater degree of transparency and equal
  opportunities in the processes of selection.
• The current system of monitoring teaching, in accordance with the introduction of the personalised
  academic assignment (and therefore, with the possibility of lecturers distributing and then
  negotiating their workload with the department, depending on their total number of hours and their
  priorities in distributing their workload between teaching, research and university extension) must
  allow for aspects such as:
    o Any staff member entitled to engage in teaching or research activities and who wishes
      to dedicate the greater part of his or her time to one or the other must be allowed to
      do so.
    o An appropriate assessment by the unit and the University of those activities not strictly
categorised as teaching or research.

The University is aware that this tool can be used in accordance with the principles that guided its
creation, in the event of an appropriate restructuring of the syllabuses in accordance with the
principles of Bologna. Therefore, whenever there is a sufficient increase in the number of hours
available in a department, the department can plan for the activity in accordance with the staff
members it could potentially assign to it.

Weaknesses:
• In some cases, centralisation of the processes of selecting and promoting administrative and
  service staff has limited the units’ freedom to engage in staff policies that affect their promotion.
• As for the teaching and research staff, there are strict legal limitations regarding the selection of
  staff, which restrict the process to universities, and to some degree to the units (schools and
  departments). While there exists some possibility of assessing academic activity, there have yet to
  be real possibilities for using this assessment for staff promotion.
• The current organisation of research activities into research groups, which can even be
  multidisciplinary, makes guaranteeing a true link between research groups and departments
difficult. This, alongside current legislation, causes the departments’ role regarding research to be
  of encouragement and little else. They have no involvement in setting priorities, planning, or even
  monitoring progress, which clashes with the principles that inspired the personalised academic
  assignment.
In the last year, more than fifteen regulations have been put into place or updated in order to be able to better manage the selection and monitoring of the activities people engage in. These included the procedure for applying the criteria for the career itineraries of the teaching and research staff, the criteria for assessing the academic activities of UPC's research staff, and the regulations concerning UPC's Committee for Selection and Assessment of Teaching and Research Staff (CSAPDIU). Needless to say, the system of assessing the lecturers' teaching activity, which was approved by the Board of Governors, came into being at a later date (December 2003), and was certified by the Agency for the Quality of the Catalan University System (AQU).

Quality monitoring and quality management

Quality monitoring

- How are responsibilities for quality monitoring shared across the institution? (e.g., specific structures, specific staff in charge of this area, reporting lines)

In March 1997, the UPC Senate approved the Framework for Quality at UPC, which established an internal structure for the actions the University would undertake to improve itself. Since then, the UPC quality assurance system has been based on the three pillars of planning, enactment and assessment. The system is based on the repetition of the cycle, and faces the constant challenge of continuing to improve.

In accordance with the proposal put forward in the framework document, UPC's Board of Trustees agreed to set up the Quality Council in order to aid UPC in the process of quality improvement.

The Council was founded to monitor the functioning of UPC's quality assurance system, by promoting the establishment of quality criteria for the improvement initiatives stemming from UPC, and by monitoring the degree to which their recommendations are followed through.

The following comprise its main functions:

- To guarantee the excellence and viability of the Framework for Quality at UPC.
- To promote a culture of quality throughout the university community.
- To promote and guarantee the participation of the entire university community in improving quality at UPC.
- To act in coordination with the Agency for the Quality of the Catalan University System in carrying out actions to improve quality.
- To promote the objectives included in the Programme Contract between UPC and the Generalitat of Catalonia.

Furthermore, the Vice-Rector of Strategic Planning, Libraries and Language Policy has specific competences in the area of quality. Amongst others, these include:

- Establishing criteria for the strategic planning of the basic units. Establishing agreements for their development.
- Organising, coordinating and supervising the monitoring process of the strategic plans.
- Monitoring the actions undertaken to promote institutional assessment processes.

In order to be able to lend support to these processes, the University depends on the Planning, Assessment and Studies Area (APAE), which was created to lend support to UPC's governing bodies in the planning and assessment processes at the institutional, sectoral, academic unit, service and staff levels. It contributes methods, analytical capacity, information, studies and technical proposals that aid the University in reaching its goals.
- **Is quality monitoring based on explicit quality standards? Are these quality standards widely known and accepted in the institution? Is there a shared culture of quality?**

UPC has a long-standing tradition (stretching back over 20 years) of compiling, studying and going on to publish and push for a greater awareness of quantitative reference data and indicators regarding its teaching and management activities.

Currently, one of the information and support platforms that is considered to be essential in the decision-making process is the managerial information system, which encompasses internal and external data, studies and reference indicators.

Producing and studying this information has increasingly been accompanied by processes of revision and monitoring, in order to strive towards a continuous process of improvement. An example of this was the establishment of indicators for the units during the strategic planning process (which were directly tied into the objectives of the Programme Contract signed between UPC and the DURSI), which included specific indicators regarding the units' planning agreements.

Therefore, one can say that the monitoring of activities and the process of strategic planning have helped to create a shared, community-wide culture of continuous improvement, whose indicators and standards are widely known and accepted. Amongst these are the following:

**Teaching (First and second cycles)**
- Students admitted whose first choice was UPC / Incoming students: 79.7%
- Female students / Total students enrolled: 26.4%
- EETC / PETC: 11.9
- Average cost per credit: €75.50
- Proportion of each credit paid by students: 15.3%
- Size of an equivalent group: 31.6
- Full-time equivalent students / Total number of students: 72.8%
- Performance parameter after having passed the selection stage: 74.0%
- Graduates who have done work placement in companies / Total number of graduates: 53.2%
- Graduates who have spent one semester abroad / Total number of graduates: 12.0%

**Teaching (Third cycle)**
- Students with minimum research capacity / Incoming students (1): 41.3%
- Students having defended a thesis / Incoming students (2): 32.0%

**Human Resources**
- PhD holders on PO / PO: 75.90%
- PAS / PJC: 0.67

**Research**
- Percentage of articles published in journals of recognised quality / Total articles published: 44.00%
- Articles published in scientific journals and in proceedings of conferences / Full-time PO: 2.18

**PO**: tenured teaching staff

**EETC**: first and second cycle full-time equivalent students (registered for 75 credits)

**PETC**: first and second cycle full-time equivalent teaching staff (240 contact hours per year)

**Performance parameter**: ratio of credits passed to credits enrolled in for first and second cycle students

**PJC**: full-time equivalent teaching staff (37.5 hours/week)

**Journals of recognised quality**: those included in the *Journal Citation Reports*, in addition to other technical journals highly regarded outside UPC

(1) This figure is obtained by dividing the total number of minimum research capacities awarded during academic years n, n-1 and n-2 over the total number of new students for academic years n-2, n-3 and n-4.

(2) This figure is obtained by dividing the total number of theses defended during academic years n and n-1 over the total number of new students during academic years n-5 and n-6.

- **How adequate are the resources available to support internal quality processes (e.g., financial resources and staff development frameworks)?**

UPC's financial resources stem in part from its institutional budget and in part from the budget of the Board of Trustees, channelled through the Quality Council, as well as subsidies and agreements signed with external bodies (ad hoc funding from quality assurance agencies, the education
authorities, etc.) to face the expenses of the assessment and quality management processes. In 2004, UPC had a total of 86,000 euros budgeted for these expenses.

These funds are not enough to take on all the initiatives suggested at the unit level. Nevertheless, they have allowed UPC to lend support to (1) institutional assessment processes in the framework of the Agency for the Quality of the Catalan University System, (2) processes of accrediting and certifying qualifications and services in the framework of the National Agency for Quality Assessment and Accreditation (ANECA), (3) ISO certification processes for its schools, departments, institutes and laboratories, (4) activities related to integrating UPC into the European Higher Education Area, (5) administering surveys aimed at gauging students' and users' opinions, and (6) fees and participation in quality networks.

- What are the available quality monitoring mechanisms with respect to teaching activities, research activities, student performance, including analysis of drop-out rate and time-to-graduation, administrative processes, entrepreneurial activities, external relations (local, regional, national and international)?

Assessing academic performance

The main indicators and data used in assessing the academic performance of UPC's students are compiled annually in a monitoring report, which is then debated prior to its subsequent approval by the University's Board of Governors.

The most significant indicators gathered in this report are as follows:

- Percentage of students having passed the selection stage (FS) over new first cycle students:
  - in the expected time (TP)
  - in the expected time plus one semester (TP+1)
  - in the expected time plus two semesters (TP+2)
- Percentage of students not having passed the selection stage over new first cycle students:
  - At the end of the first year of the selection stage
  - At the end of the second year of the selection stage
- In the non-selection stage (FnS):
  - The performance parameter of the students (credits approved/credits enrolled in)
  - Average number of credits per student enrolled
  - Number of credits per student enrolled over theoretical annual number of credits
  - Average number of credits passed per student

The report on graduates also highlights other indicators that measure the academic performance of the students, such as:

- Average time taken to graduate
- Duration of studies
- Rate of efficiency (average number of credits enrolled in per student / theoretical number of credits for the qualification)

Analysing teaching assignments

The process of planning what is taught at each school is mainly monitored by monitoring teaching assignments. The proposal of the credits a school will offer and is responsible for organising is then negotiated and delegated to the departments that will actually teach the subjects, and subsequently broken down according to the teaching capacities of the associate teaching and research staff in each department.

At the end of each academic year, a review is made of the classes that have been taught. This information is later reflected in each lecturer's academic record to facilitate any subsequent assessment required for access to promotion through civil service exams or requests for teaching stages.
Opinion polls
For many years, UPC has conducted regular, biannual opinion polls to gauge the feelings of different groups at the University towards a variety of topics. The results are then used as a source of information for introducing measures to correct problems or reinforce initiatives. The following include some of the surveys regularly undertaken:

- Student survey regarding their lecturers' teaching
- Student survey on the subjects taught
- Graduate survey on career integration and to assess the services they received at UPC
- Doctoral student survey on the training received and of PhD holders on their work status
- Lifelong training student survey

The process of institutional assessment of units, services and processes
The institutional assessment process forms part of the Technical University of Catalonia's quality assurance system and fits into the framework of the programme promoted by the Agency for the Quality of the Catalan University System.

UPC responded to the first edition of the Quality Assessment Plan with an overall project to establish a programme that would expand year after year and which would assess all the qualifications taught at UPC, the research carried out by the departments most closely associated with these qualifications and of the most relevant university services and processes.

Assessing research
For a number of years, as pointed out above, UPC has had an active policy of monitoring research activities upon which it bases the subsequent allotment of internal resources for supporting research. This monitoring is carried out mainly by collecting personalised information on each of the lecturers as regards scientific output and results transfer, and a subsequent assessment of this information by assigning it a number of Research Activity Points (PAR) or Research Activity Points for Research of Recognised Quality (PAR type 1).

Assessing the support services
The University's services have progressively added tools in order to better incorporate a culture of quality, in keeping with UPC's tradition of accountability in all its activities. Good examples of this are the transverse plans, the University Library, the Institutional and International Relations Service and training programmes, which have incorporated indicators and monitoring processes. Other units have preferred to carry out massive surveys, and others have set up mechanisms such as service charters in order to clarify the issues involved and to monitor their commitment to their users.

- To what extent are their outcomes used in decision-making and strategic planning?

UPC has criteria for computing the quantity and quality of the activities it engages in, in addition to mechanisms for gaining insights into the opinions of the users of its services.

Therefore, every year it gathers whatever information is necessary in order to calculate the research activity points (PAR points), which it then uses to distribute resources at different levels (in terms of people, research groups or basic units). Amongst others, the PAR points allow the University to prioritise the assignation of technical support staff, applications for scientific equipment and grants towards the organisation of conferences, and to assess the potential of research groups so as to determine whether to assign them research grants.

Other point scales have recently been introduced to extend this assessment to the remainder of the University's activities.
Amongst other elements, the students’ assessment of their lecturers is taken into account in order to assess the quality of each lecturer’s teaching. This also has further consequences for processes such as assigning pay supplements on the basis of teaching merits.

In general, the use of indicators and parameters in order to make decisions at different levels is a characteristic element of the functioning of UPC’s governing bodies.

**B. Quality management**

**Strategic planning in the basic units**

UPC has initiated a new stage of strategic planning of the schools, departments and institutes (2003-2006), placing the emphasis on the commitment of the basic units towards the institutional project of UPC. This commitment is formalised through the programme agreements, which have two components: a common one, through which the units determine their participation in achieving the general objectives of the University and propose their own objectives; and a specific one, which comprises the strategic projects of each unit that are designed to make qualitative progress in their academic activities and that require the financial or technical support of the institution. The two components complement each other and allow any initiative that is of strategic interest to be developed.

Therefore, the strategic planning in the basic units is organised under the following premises:

- The desire for joint responsibility and the desire to promote the identification of the units and of the university community with the general aims of the institution.
- Establishing the channels through which the basic units, in accordance with their specificities, can incorporate and promote their own plans and activities.

During the 2002-2003 academic year, all the units presented their programme agreements, which were approved by the Board of Governors and by the governing bodies of the units. In the course of 2004, the first monitoring of the common component was carried out, and it represented a total assignation of €4,481,645.99 (a 12.5% increase over the previous year).

Furthermore, in the framework of the specific component, priority was given to 23 of the 30 specific projects presented to the first call for proposals in 2004, involving the collaboration of 29 departments. The various types of funding laid down in the call for proposals were awarded (budgetary assignation to a total amount of €150,000, specific technical support and the priorities of calls for proposals). Specific funding was also obtained from the DURSI (Ministry of Universities, Research and the Information Society) for individual projects.

**The strategic plans of the services**

In order to develop given lines of work or sectoral policies laid down in the strategic planning, plans or working frameworks were drawn up to establish the bases and objectives to be reached in a given period. These documents, which involve an operational deployment of several transverse policies, have been called Sectoral Plans, and have been used as a reference for the strategic planning of the basic units.

- **The PAIDEIA Libraries Plan for 2000-2005**
  The University Library has a long tradition of strategic programming of its libraries. Its current mission is “to raise the quality of teaching and research at the University”. This has allowed it to improve all library services and to standardise its internal processes. UPC’s University Library has been a pioneer in its participation in the various processes of evaluation at the level of both Catalonia and Spain. In 2004 it received the First Quality Certificate awarded by the MECD and ANECA.

- **The International Relations Plan**
  Promotion of UPC’s outreach in teaching, research, transfer, services, management and cooperation.

- **The Language and Terminology Service Plan**
Specifying the services of language consultancy, promotion and training to meet the needs of teaching staff, administrative and service staff, students and the management and governing bodies.

- **The Social Service Activities (UNIVERS) Plan**
  For the sporting, cultural and leisure activities aimed at the university community.

- **The Environment Plan**
  Identifying and promoting initiatives that favour the involvement of the whole university community in defending the environment in education and research, and in the working environment.

- **The Occupational Hazards Plan**
  Integrating occupational hazard prevention in all the activities and decisions of UPC.

- **The Tutorial Action Plan**
  Including the tutorial initiatives and actions that are carried out in many schools in order to promote their generalisation and integrate them in a common framework of action.

- **The UPC Course Promotion Plan**
  Integration, coordination, development and improvement of the actions aimed at informing, guiding and welcoming students who wish to study at UPC.

- **The Women's Programme**
  Working to relate the world of technology to the academic and professional interests of women, and to achieve equal opportunities in the choice of profession, development and integration in the technological world.

The governing body is also reinforcing its planning efforts through the drawing up of two investment plans for the period 2004-2006 in the area of ICTs and existing buildings. The aim of this new policy is, through transparent decision-making, to give priority to the needs of the units according to the budget available. For 2004, the Buildings Plan has a total budget of €10,550,000 and the ICT Plan has a total budget of €1,050,000. Furthermore, linked to the 2005 budget, a call for proposals to fund teaching equipment is planned.
# APPENDIX I – Abbreviations Used

## Basic Units

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<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>CFIS</td>
<td>Interdisciplinary Higher Education Centre</td>
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<tr>
<td>EPSC</td>
<td>Technical School of Castelldefels</td>
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<tr>
<td>EPSEB</td>
<td>Technical School of Building Construction of Barcelona (formerly the Technical College of Barcelona, EUPB)</td>
</tr>
<tr>
<td>EPSEVG</td>
<td>Technical School of Engineering of Vilanova i la Geltrú (formerly the EUPVG)</td>
</tr>
<tr>
<td>ETSAB</td>
<td>School of Architecture of Barcelona</td>
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<tr>
<td>ETSAV</td>
<td>School of Architecture of the Vallès</td>
</tr>
<tr>
<td>ETSECCPB</td>
<td>School of Civil Engineering of Barcelona</td>
</tr>
<tr>
<td>ETSEIB</td>
<td>School of Industrial Engineering of Barcelona</td>
</tr>
<tr>
<td>ETSEIT</td>
<td>School of Industrial Engineering of Terrassa</td>
</tr>
<tr>
<td>ETSETB</td>
<td>School of Telecommunications Engineering of Barcelona</td>
</tr>
<tr>
<td>EUETIT</td>
<td>College of Industrial Engineering of Terrassa</td>
</tr>
<tr>
<td>EUOOT</td>
<td>College of Optics and Optometry of Terrassa</td>
</tr>
<tr>
<td>EUPM</td>
<td>Technical College of Manresa</td>
</tr>
<tr>
<td>FIB</td>
<td>Barcelona School of Informatics</td>
</tr>
<tr>
<td>FME</td>
<td>Faculty of Mathematics and Statistics</td>
</tr>
<tr>
<td>FNB</td>
<td>Faculty of Nautical Studies of Barcelona</td>
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<tr>
<td>ICE</td>
<td>Institute of Education Sciences</td>
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## Associate schools

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<th>Abbreviation</th>
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<tbody>
<tr>
<td>EAE</td>
<td>School of Business Administration</td>
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<tr>
<td>ESAB</td>
<td>College of Agricultural Engineering of Barcelona</td>
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<tr>
<td>EUETIB</td>
<td>College of Industrial Engineering of Barcelona</td>
</tr>
<tr>
<td>EUETII</td>
<td>College of Industrial Engineering of Igualada</td>
</tr>
<tr>
<td>EUETTPC</td>
<td>College of Knitted Fabric Engineering of Canet de Mar</td>
</tr>
<tr>
<td>EUNCET</td>
<td>Caixa d’Estalvis de Terrassa Business College</td>
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<tr>
<td>EUPMT</td>
<td>Technical College of Mataró</td>
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## Others

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<tr>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>AIDIT</td>
<td>Agency for Accreditation in Research, Development and Technological Innovation</td>
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<tr>
<td>ANECA</td>
<td>National Agency for Quality Assessment and Accreditation</td>
</tr>
<tr>
<td>APAE</td>
<td>Planning, Assessment and Studies Area</td>
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<tr>
<td>AQU</td>
<td>Agency for the Quality of the Catalan University System</td>
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<td>CRUE</td>
<td>Conference of Rectors of Spanish Universities</td>
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<tr>
<td>CSAPDU</td>
<td>Committee for Selection and Assessment of Teaching and Research Staff</td>
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<tr>
<td>CTT</td>
<td>Technology Transfer Centre</td>
</tr>
<tr>
<td>DURSI</td>
<td>Ministry of Universities, Research and the Information Society</td>
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<tr>
<td>EHEA</td>
<td>European Higher Education Area</td>
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<tr>
<td>EETC</td>
<td>First and second cycle full-time equivalent students (enrolled for 75 credits)</td>
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<td>FnS</td>
<td>Non-selection stage</td>
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<tr>
<td>FS</td>
<td>Selection stage</td>
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<tr>
<td>LOU</td>
<td>Organic Law on Universities</td>
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<td>LUC</td>
<td>Catalan Universities Law</td>
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<tr>
<td>MECD</td>
<td>Ministry of Education, Science and Sport</td>
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<tr>
<td>OOI</td>
<td>Careers Guidance and Integration Office</td>
</tr>
<tr>
<td>PAAU</td>
<td>University Entrance Examination</td>
</tr>
<tr>
<td>PAS</td>
<td>Administrative and Service Staff</td>
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<tr>
<td>PAR</td>
<td>Points for Research Activities</td>
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<tr>
<td>PDI</td>
<td>Teaching and research staff</td>
</tr>
<tr>
<td>PETC</td>
<td>First and second cycle full-time equivalent teaching staff</td>
</tr>
<tr>
<td>PIU</td>
<td>Multi-Year University Investment Plan</td>
</tr>
<tr>
<td>PO</td>
<td>Tenured teaching staff</td>
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<tr>
<td>SBD</td>
<td>University Library</td>
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