![AQU Agència per a la Qualitat del Sistema Universitari de Catalunya](logo)

Cross-sectional report

INDUSTRIAL ENGINEERING AND LOGISTICS

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Course fill rate

1. The course fill rate, or actual enrolment in the number of available places on degree courses, is highly variable, with high rates for Engineering degrees in Industrial Design and Product Development, Aerospace Engineering and Materials Engineering, which are first-level degrees that in general are offered at few institutions. In the case of the first two of these there is also an upward trend in the first preference demand.

2. Undergraduate degrees in Mechanical Engineering/Mechatronics, and Electrical Engineering/Industrial Electronics Engineering and Automation have low course fill rates and with a downward trend.

3. The rate of first preference for degree courses delivered in the city of Barcelona have an indicator of demand that is nearly 50% higher than the rest. The same is true for degrees offered by UPC compared to the others.

Teaching staff and laboratories

4. The years of crisis have taken their toll as far as teaching staff and laboratories are concerned.

5. The external review panels identified overwork among teaching staff that makes not only teaching work difficult, but also the participation of teaching staff in research groups and projects. Nevertheless, and in general terms, the students' perception of the teaching skills of teaching staff was good.

6. There was a small number of industrial engineers among the teaching staff on some programmes and in certain cases the number of engineers in the same field of the degree subject was clearly insufficient. This latter point is of particular concern in the case of undergraduate Engineering degrees in Industrial Organisation.

7. Important shortcomings were identified in teaching labs. These range from the need for equipment upgrades, the need to expand equipment capability in order to take account of the latest developments in the industry, to the need to cover aspects not provided previously in practicals due to the lack of appropriate material.

Student support

8. Tutorial support plans and careers and professional guidance were, in general, poorly assessed by students. The way in which these activities are carried out needs to be reviewed. In this regard, certain faculties are offering interesting and innovative options such as NESTOR, PATiO, Face3Face, Forums, etc.

Findings

9. Significant data are still not available on graduation and drop-out rates. Attempts have been made, however, to analyse academic results using other known data, such as the credit pass rate and the first-year drop-out rate.

10. In terms of academic achievement, three quarters of all the programmes analysed had a performance rate of over 70%. Degree courses in Materials Engineering had the lowest rate (53%).

11. First-year drop-out: The drop-out rate for Aerospace Engineering was very low (under 8%) and also stable over time. For Chemical Engineering, at the other end of the scale, it was high (40%). For all other degrees it was between 12% to 27%.

12. A more in-depth study needs to be carried out in order to cross-reference the data and propose actions aimed at improving programme academic outcomes.

13. The employment outcomes of graduates in Production Engineering are very good and slightly better that those of all other degree programmes in Engineering as well as programmes as a whole in the university system in Catalonia.

14. Graduates are satisfied with the degree courses they take and the impact that they have on them personally. A certain level of dissatisfaction was identified with tutoring, with graduates rating student support services, teaching methodology and systems of assessment at around 5. They perceive the programmes they pursued as being too theoretical, and that improved skills are required in a third language, leadership and decision-making.

Internal quality assurance systems (IQAs)

15. IQAs were the main pending issue at the time of the site visit. The quality culture is still not firmly established among the different groups.

16. More work needs to be done in the actual and efficient introduction of IQAs, in the gathering and analysis of systematic data, in the drawing up of proposals for evidence-based enhancement plans and in the monitoring and follow-up of the implementation of these plans.