

PROPOSED SUBJECT

ENGINEERING IN INDUSTRIAL DESIGN

Today's society faces the challenge to reshape the system of consumption, so market strategies and commercial competitiveness are not the only ones to prevail. The product's intrinsic quality (as an object to be manufactured in series), its adequacy to cultural demands, the technological possibilities, and the environmental requirements are, among many others, factors which confer expectations of both consumers and users. Convergence of users' needs, social and cultural interests, and business expectations need an appropriate reasonable design. It all requires a clever appropriate technical development, an economical and qualitative production, and an easy profitable commercialization. Within this context, two complex fields emerge: design and engineering. They both have to be understood as a whole, whether the results obtained are objects, systems, services or interfaces. Currently, subjects such as digital technologies, social networks user's interaction, big data, new emerging markets, differential valorization of actions –such as registering products' patents and/or designs' patents–, or new scale of substances affect industrial design, and require a reflection and a clear actualization.

While design is the activity aiming to produce necessary objects for society with a specific purpose, engineering means the embodiment of this idea into reality. This supposes that, through techniques, designs and models, as well as through knowledge provided by sciences, engineering can solve problems and satisfy human needs. It is clear that both fields share the project's culture, and they complement each other from a theoretical point of view. On the one hand, design studies encourage the student's creativity through a reflexive vision of the society, and they also provide the strategic responses for global problems. On the other hand, studies in Engineering in Industrial Design provide a technical preparation and the tools needed to develop this product effectively. However, from a practical point of view, among the competencies required for engineers in Industrial Design, there is design, redesign, develop, and managing the product. This allows us to reflect on both disciplines, especially on those fields clearly interacting, reacting, and overlapping. In this sense, we should highlight that ELISAVA School launched, in 2013, a Simultaneous Study Plan, where Degree in Design and

Degree in Industrial Design converge. This is the only plan of this type in Spain and it is a pioneer project in the international arena.

In this context, with a comprehensive approach coming from every field in design, development and product management, issue 32 aims to emphasize the relationship between the engineer in Industrial Design and the different steps of the project, the design process, and the creative project. At the same time, it opens doors to new reflections on the future of this profession, and how it has to adapt to new markets, cultures, societies and moments.

From this positioning, different areas of analysis are considered:

- To what extent an engineer has the capacity to formalise a product?
- How does technological innovation lives with tradition and culture?
- How does the training for engineers have to be in the so-called “culture of design” and how do they integrate in the project?
- Which is the approach to product’s creative process from engineering?
- To what extent do engineers in industrial design and industrial designers complement each other?
- How do new scenarios in products, new technologies associated to product, new consumers, new legislations, and product interaction are considered?
- Which elements and processes reinforce innovation in products?
- Which areas in technology can be the key in new ways of designing products?
- How do desire of consumption and social, economical and environmental responsibility equilibrate?